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Pages 837-892

AMERICAN

DYESTUFF REPORTER

ANNUAL PROCESSING REVIEW NUMBER

here's how modern dyers
LOWER PROCESSING COSTS

INCREASED WASHABILITY

INCREASED COLOR RANGE

INCREASED SALES APPEAL

and give you
ADDED PERFORMANCE VALUES
on Cottons and Rayons

Today's dyer knows how to cut costs, and still achieve quality results. That's why for cottons and rayons many dyers are recommending direct dyestuffs after-treated with Geigy's *Gycofix 67*. This economical dyeing procedure results in outstanding fastness to washing and perspiration . . . equal or superior to that achieved with developed colors. Use of the Cuprophenyl and selected direct dyestuffs also makes possible a wider range of shades from which the designer may choose.

In crease-resistant resin finishes — of vital importance in today's Performance conscious market — the use of Gycofix 67 with Cuprophenyl dyestuffs effects further economies. It can be applied simultaneously with the resin finish in one simple, problem-free operation. This procedure achieves the fastness properties desired plus versatility of hand.

Gycofix 67 is just one of Geigy's many contributions to greater economies and better Performance Values in textiles.

"Cuprophenyl" and "Gycofix" are Geigy registered trademarks.

GYCOFIX 67

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DIVISION OF GEIGY CHEMICAL CORPORATION
89-91 BARCLAY STREET, NEW YORK 8, NEW YORK

Geigy — *dyestuff makers since 1859*

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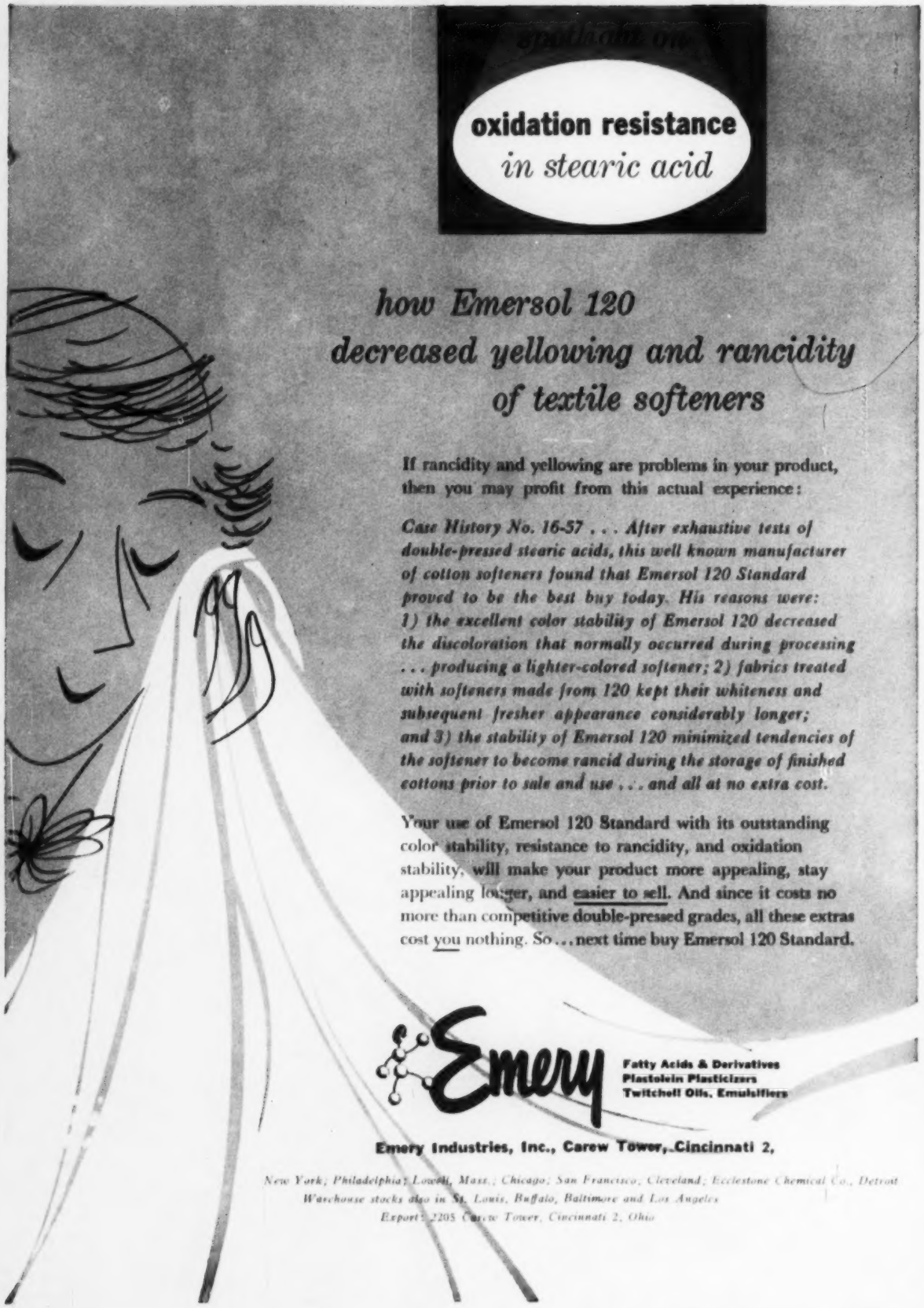

oxidation resistance
in stearic acid

how Emersol 120 decreased yellowing and rancidity of textile softeners

If rancidity and yellowing are problems in your product, then you may profit from this actual experience:

Case History No. 16-57 . . . After exhaustive tests of double-pressed stearic acids, this well known manufacturer of cotton softeners found that Emersol 120 Standard proved to be the best buy today. His reasons were: 1) the excellent color stability of Emersol 120 decreased the discoloration that normally occurred during processing . . . producing a lighter-colored softener; 2) fabrics treated with softeners made from 120 kept their whiteness and subsequent fresher appearance considerably longer; and 3) the stability of Emersol 120 minimized tendencies of the softener to become rancid during the storage of finished cottons prior to sale and use . . . and all at no extra cost.

Your use of Emersol 120 Standard with its outstanding color stability, resistance to rancidity, and oxidation stability, will make your product more appealing, stay appealing longer, and easier to sell. And since it costs no more than competitive double-pressed grades, all these extras cost you nothing. So . . . next time buy Emersol 120 Standard.

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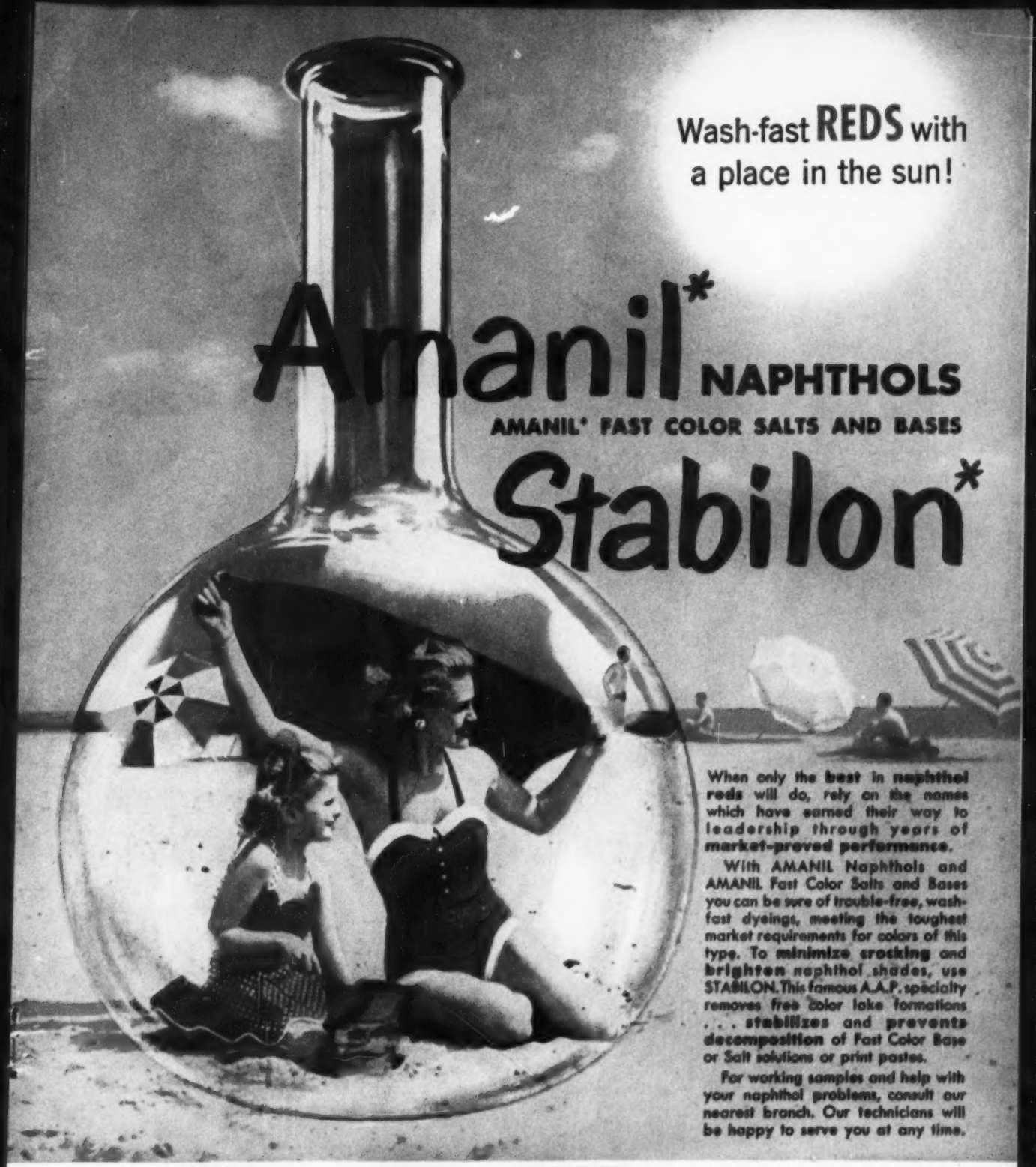

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Stabilon*

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★ color fastness
★ shrinkage
★ detergency
★ bleeding
★ resistance to mechanical action, etc.

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As the standard washing machine of the A.A.T.C.C., the Launder-Ometer is used to reproduce quickly the destructive effects of commercial laundering practices on all types of fabrics. The New Metal Specimen Containers and Adaptor Plates now available for use in the 2A, 3A, and 4A Washfastness Test were designed to reproduce in one forty-five minute test the effects of five commercial launderings. Under these accelerated conditions, factual information is obtained that enables manufacturers to accurately predict color fastness to soaps and detergents, and resistance to bleeding, shrinking, washing and mechanical action. In addition, the Launder-Ometer is used for dyeing tests at boiling point.

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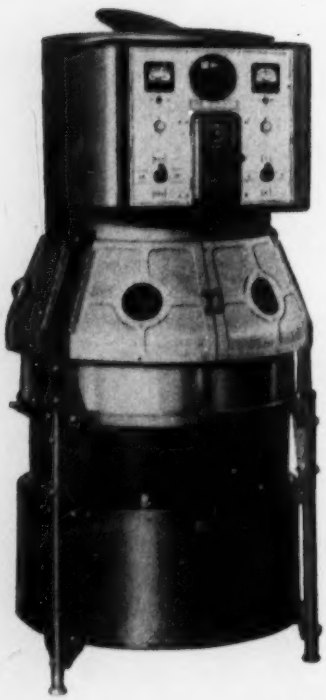
In the Launder-Ometer, all sheet metal parts coming into direct contact with water, including the test chamber and cover, and pre-heating loading table are constructed of stainless steel for permanent resistance to corrosion.



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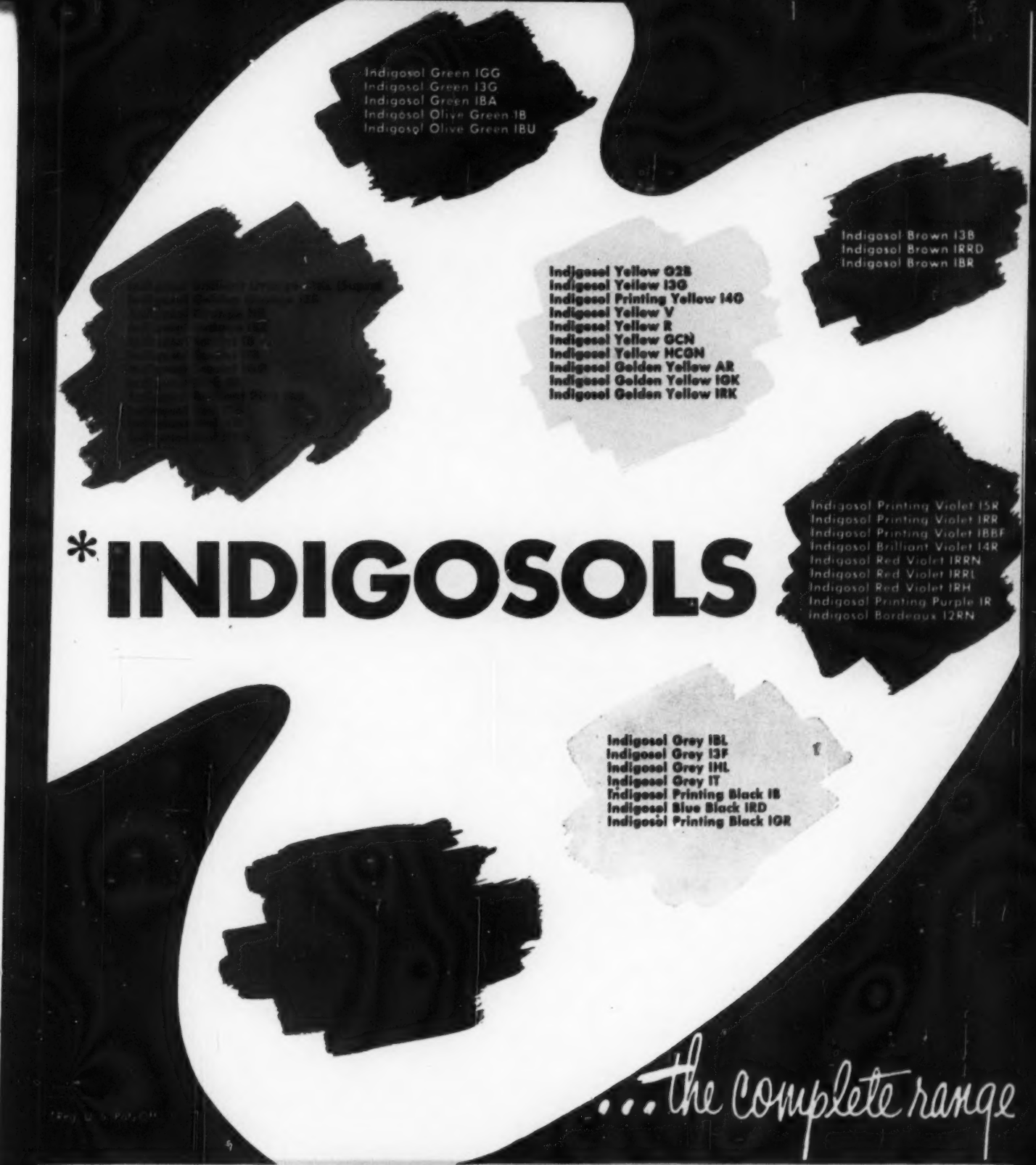

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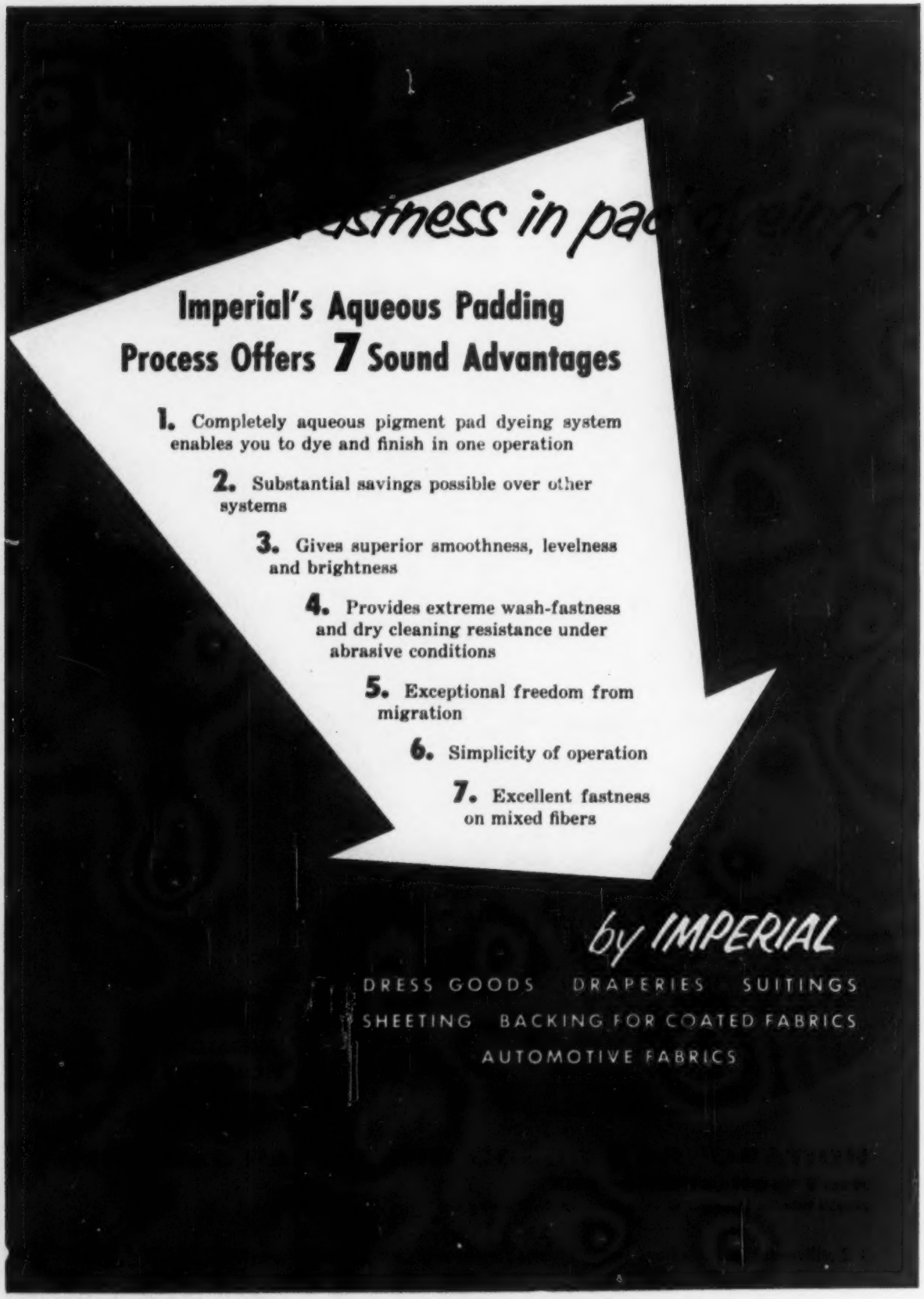
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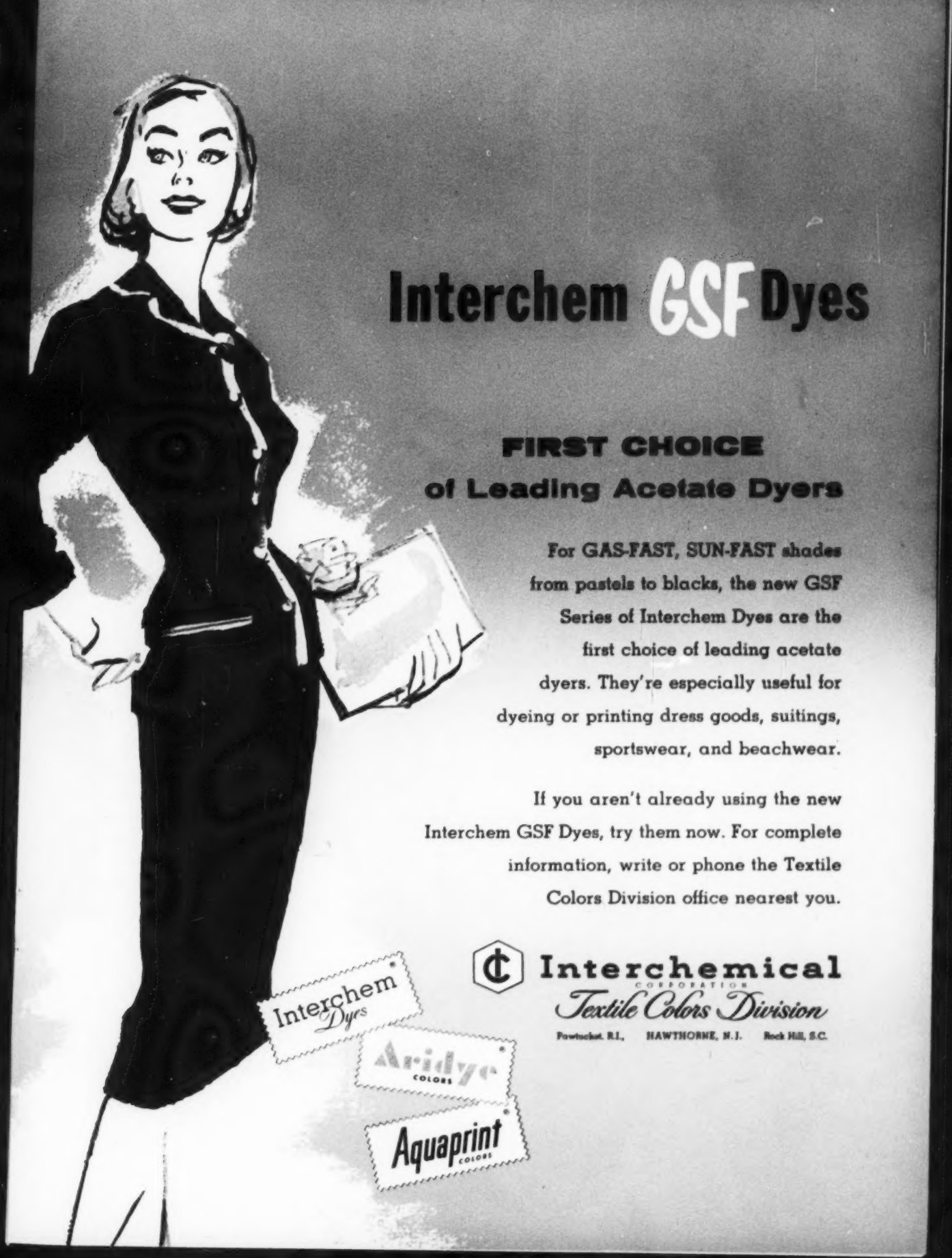
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MONSANTO TEXTILE TALK

BOTH TYPES OF RESLOOM* GIVE COTTONS A LASTING "WASH 'N WEAR" FINISH!

Which type of resin gives the most effective "wash 'n wear" finish to cottons? The controversy is raging—what is best for you?

If you favor a melamine resin, Monsanto recommends *Resloom HP* or *M-75*. If you prefer a cyclic-urea formaldehyde resin, Monsanto offers *Resloom E-50*. Both types of resins are compatible, and subtle yet significant changes in the finish for your cottons can be obtained through the use of a "blend." To determine what is best for your application, call on Monsanto—the only producer of cyclic urea and melamine-type resins.

Reslooms are outstanding in imparting dimensional stability and wrinkle recovery. Both types are remarkably durable. They do not wash or dry clean out of fabrics.

Unlike ordinary finishes, Resloom resins do not coat the surface. They are deposited inside absorbent fibers where they actually modify fiber characteristics.

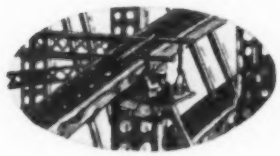
A Monsanto representative will be glad to work with you on technical problems relating to "wash 'n wear" finishes. Write Monsanto Chemical Company, Plastics Division, Dept. AD-12, Springfield 2, Massachusetts.

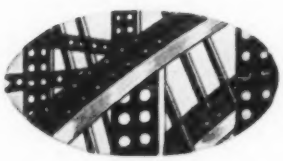
It pays to finish fabrics with durable

RESLOOM *TEXTILE RESINS*

MONSANTO

*RESLOOM, REG. U. S. PAT. OFF.





Preparation for a trouble-free finish...

WHAT HAS A BRIDGE TO DO WITH TEXTILES, you ask?

Well . . . for one thing they both need *preparation for a fine finish:* the bridge needs its vital rust-resisting prime coat of red lead prior to the finish coats; and textiles need the vital de-sizing operation prior to bleaching and dyeing.

Which brings us—naturally—to Diastafor de-sizing agent.

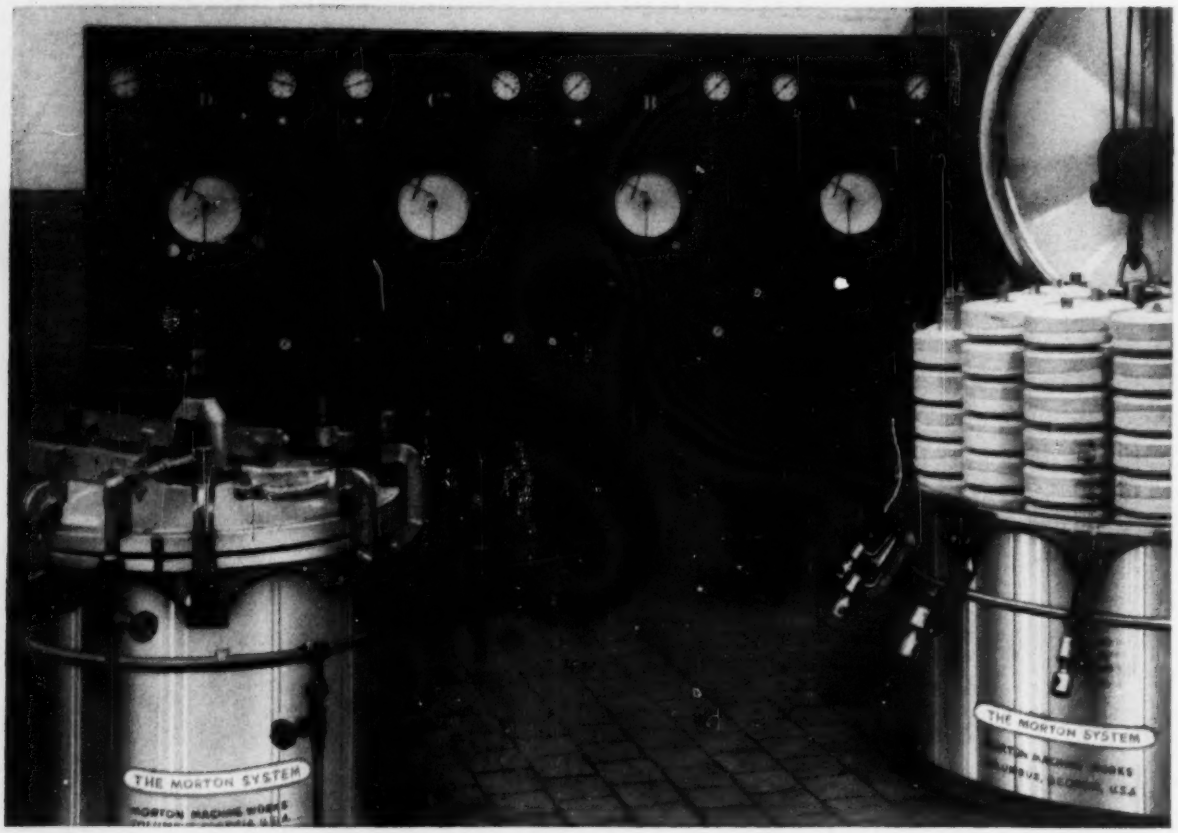
Diastafor *works.* It works in an unusually wide range of temperatures and pH, a range which will satisfy your every enzyme de-sizing requirement. And more—you will discover it works with ease, speed and economy.

No matter under what conditions you may be working—with various lots . . . with variations in water and sizing formulas . . . with cottons, rayons or mixed goods—Diastafor, available in types L, L_2 and D, will prove itself to you, in your own mill. Try it for either the continuous or batch process. Remember: it has been a leader in its field for 44 years!

Our sales and technical staffs are ready to save you time and trouble. For your own trouble-free finish, consult us. Standard Brands Incorporated, Diastafor Department, 595 Madison Avenue, New York 22, New York.

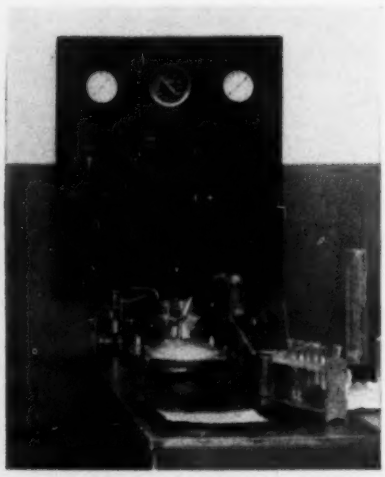
DIASTAFOR

A TRADE MARK OF STANDARD BRANDS INCORPORATED



THEY NEVER SAY DYE...

without Taylor controls at Hathaway Manufacturing Co., New Bedford, Mass.



IN THE LAB, as well as on their Morton Machine Company package dyeing machines, they rely on Taylor automatic controls to deliver uniformly high quality at minimum cost. Instruments for each machine are mounted on a Taylor coordinated panel and comprise:

1. A FULSCOPE* Controller with Process Timer for automatic control of temperature and the time of the overall dyeing cycle.

2. A FLEX-O-TIMER* Time-Cycle Controller which operates the dye liquor reversing valve, giving a specific inside-out and outside-in cycle. It precisely times flow reversal, thus assuring greater uniformity.

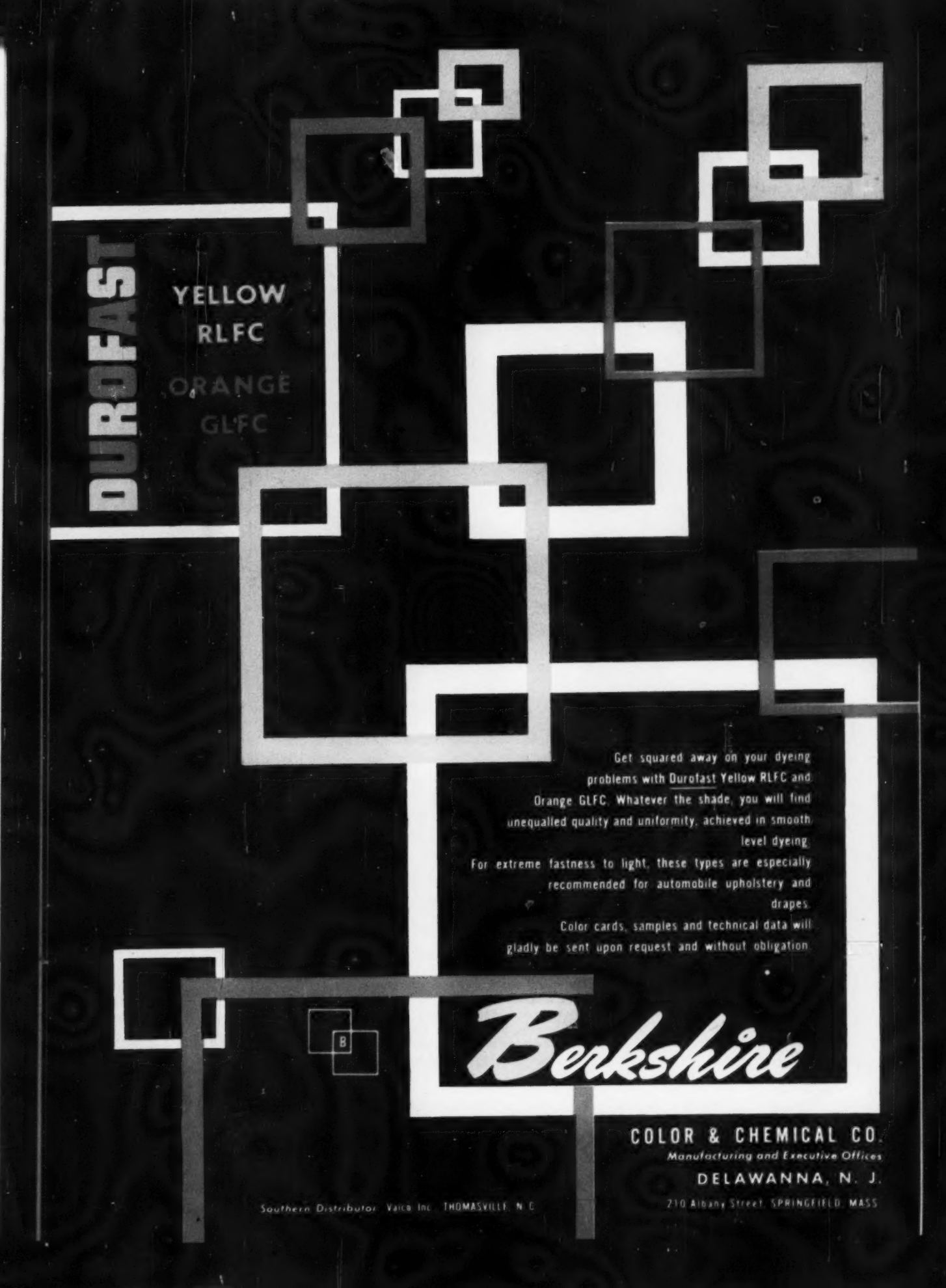
3. Signal lights which let the operator see at a glance just what part of cycle he's in. They also let him know the direction of flow at any time.

This package dye control system is only one of the many ways you can "beat rising costs with Taylor Accuracy." Whatever dyeing problems you have, we can help you solve them by working out an efficient Taylor Automatic Control System for you. Ask your Taylor Field Engineer, or write Taylor Instrument Companies, Rochester, N.Y. or Toronto, Canada.

Instruments for indicating, recording and controlling temperature, pressure, flow, liquid level, speed, density, load and humidity.

*Reg. U.S. Pat. Off.

Taylor Instruments MEAN ACCURACY FIRST


DUROFAST
YELLOW
RLFC
ORANGE
GLFC
Get squared away on your dyeing problems with Durofast Yellow RLFC and Orange GLFC. Whatever the shade, you will find unequalled quality and uniformity, achieved in smooth level dyeing.
For extreme fastness to light, these types are especially recommended for automobile upholstery and drapes.
Color cards, samples and technical data will gladly be sent upon request and without obligation.
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Berkshire
COLOR & CHEMICAL CO.
Manufacturing and Executive Offices
DELAWANNA, N. J.
210 Albany Street SPRINGFIELD, MASS
Southern Distributor Valco Inc. THOMASVILLE, N. C.

"VIRGINIA" SODIUM / HYDRO UNIFORMITY

assures perfectly matched shades in *your* dye house and cloth room

Accurate duplication of shades in dye house and cloth room is a "must" for smooth profitable operations. Many leading concerns the world over have made certain of perfectly matched shades for years by routine use of "Virginia" Sodium Hydro.

Reliable performance of the concentrated hydro is due to its uniformity—its unvarying strength and quality. "Virginia" Sodium Hydro is uniformly crystalline in character, free-flowing and readily soluble in water; it is stable in storage and in the bath.

We feel sure that these factors, plus proved economy and dependable delivery, will enable our hydro to give a good account of itself in your plant. We want you to try it, and will gladly send you a test sample, along with literature describing the properties and advantages of this useful chemical.

Better still, ask for one of our technical service staff to call, survey your requirements, and develop an application of "Virginia" Sodium Hydro to your dyeing, reducing or stripping demands. Write or wire us today.

VIRGINIA SMELTING COMPANY
Industrial Department
Dept. 72, West Norfolk, Virginia

VIRGINIA Chemicals

Field Offices: NEW YORK • BOSTON • DETROIT
CHICAGO • ATLANTA • ASHEVILLE
Available in Canada and many other countries

CONTROL!

That's the secret behind the Schollerizing Process . . . the process that saves the size and the fabric—and makes wool safely WASHABLE!

Schollerized* WASHABLE WOOL SAFE TO TUB • SAFE TO RUB

*U.S. and Foreign Patents Pending

For decades, science has known that chlorination would prevent matting and felting in wool—the cause of permanent wool shrinkage. What science did *not* know, however, was how to apply the chlorine so that the wool itself would not be harmed.

Until SCHOLLERIZING was introduced, a grave danger was presented in chlorinating wool—it had to be *just right*. This was too much of a problem in the average plant until SCHOLLERIZING took the gamble out of chlorination as a process that makes use of *exactly* the necessary amount of chlorine—no more, no less—assuring wool maximum shrink-resistance with no loss of elasticity, resiliency, texture or tensile strength! Indeed, Schollerized wool is recognized as being superior to the unprocessed!

The Schollerize Process is available to you, in the United States and Canada, without royalties, licenses or legal mumbo-jumbo. Write or phone us for details of how SCHOLLERIZING can make YOUR wool product a BETTER wool product!

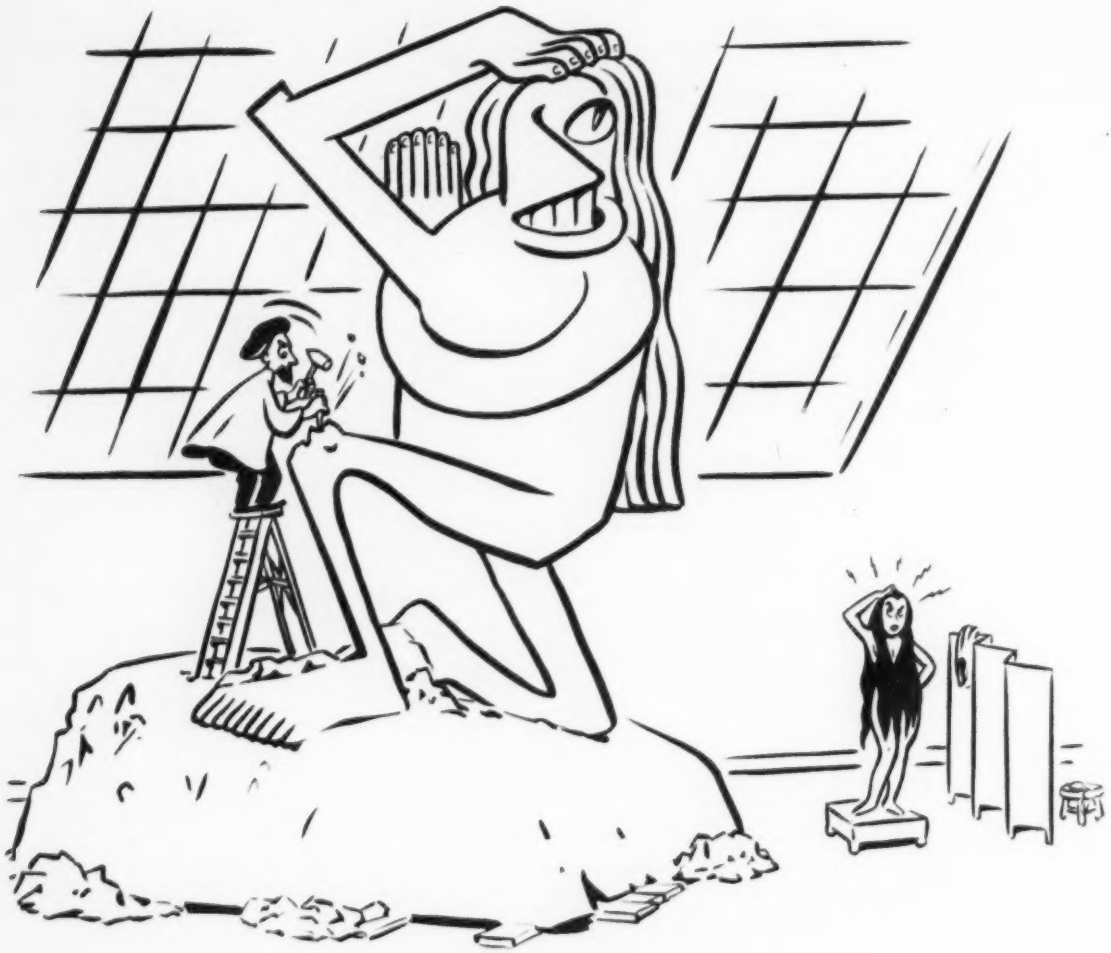
● Schollerizing Prevents Shrinkage in Wool by Eliminating Matting and Felting . . . a process that is safe, uniform and requires no extraordinary skills.

Scholler BROTHERS, INC.

WRITE FOR ALL THE DETAILS OF SCHOLLERIZING AS APPLIED TO YOUR WOOL PRODUCT!

Manufacturers of Scouring, Dyeing and Finishing Materials; Soaps, Softeners and Sulphonated Oils
COLLINS at WESTMORELAND, PHILADELPHIA 34, PA.
IN CANADA: SCHOLLER BROTHERS, LTD., ST. CATHARINES, ONTARIO

SCHOLLERIZE . . . The *SAFE* Wool Shrinkage Control Process



Talk about freedom of design, here's

WICALOID

Wicaloids are latex compounds for the textile industry—for impregnating, coating and laminating. They permit revolutionary new ideas in design. Already more than 40 different Wicaloids have been developed for individual needs. Wica will analyze your own conditions and problems, and will create a pre-tested Wicaloid specifically for you—just as a pharmacist compounds a prescription.

SPECTRUM ACCURACY

Wica

WICA CHEMICALS INCORPORATED

OLD CONCORD ROAD ● CHARLOTTE, N. C.

synthetic organic chemicals ● textile specialties
latices ● adhesives

fastest colors

under the sun

and under the suds

for all fibers and blends

they're new!

belle fast

*means ULTRA fast**

colors for cotton and viscose

Write for complete information.
Our technical service is available at all times.

BELLE COLORS

Belle Chemical Company, Inc. / Reading, Pennsylvania / Charlotte, North Carolina

*when aftertreated with Bellefix CN or Bellefix VS

Developments in Color Measurement

INCREASE YOUR PRODUCTION by providing fast, accurate control of color processes with G-E recording spectrophotometers. A permanent record of any color is provided and formula adjustments may be easily made.

GENERAL ANILINE COLORIST SAYS . . .

"General Electric Spectrophotometers Prove Color Analysis and Duplication of

"Even the most complicated color-matching problems are taken in stride by General Electric's spectrophotometers and integrators," says Irving W. Feyler, Colorist at General Aniline & Film Corporation, Rensselaer, N. Y.

RAPID PRODUCTION-LINE ANALYSIS of dyestuffs by G-E spectrophotometers help General Aniline technicians maintain constant color control. Analysis of test sampling curves aid the colorist in matching General Aniline's standards. A complete spectrophotometric curve of the most complex dyestuffs can be drawn in only 54 seconds.

MATERIAL SAVINGS are assured because costly mismatching of dyestuffs is practically eliminated. The G-E spectrophotometer helps provide permanent color standards by furnishing a positive record of any color in quantitative terms of fundamental physical units.

POSITIVE IDENTIFICATION is provided by General Electric spectrophotometers which have a range of 380 to 700 millimicrons*. Both transparent and opaque specimens may be analyzed. The instrument is simple to operate and is used as a double-check on the judgment of the colorist when multi-color-matching problems arise.

General Aniline achieves additional savings in time by using the automatic tristimulus integrator to calculate tristimulus values. Provided as an accessory to the

1. INSERTION of dyestuff sample and standard into G-E spectrophotometer is the first step in production-line color measurement. Samples may be either transparent or opaque.

2. SELECTION of recording speed is next. Operating automatically, the G-E instrument draws a complete spectrophotometric curve of the most complex dyestuffs in only 54 seconds.

3. ANALYSIS of curves determines any variations from standard and necessary corrections. The automatic tristimulus integrator saves up to 20 minutes per sample in analysis time.

Invaluable for the Dyestuffs"

G-E recording spectrophotometer, the integrator calculates the values automatically at the completion of the spectrophotometric curve. The numerical values are used to set up color tolerances, color standards, and color formulation.

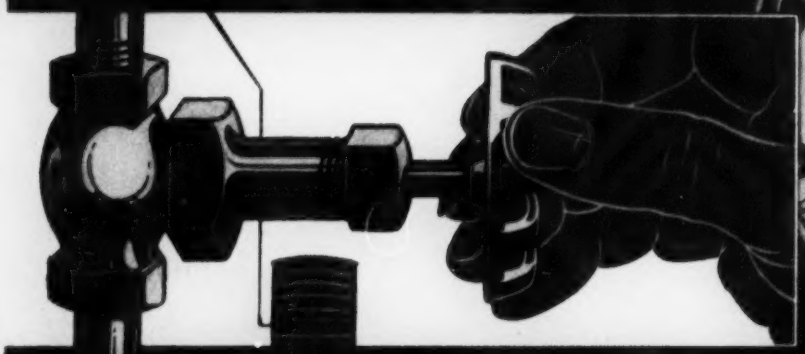
FOR MORE INFORMATION, contact your nearest G-E Apparatus Sales Office, or write for Bulletin GEC-307 to General Electric, Section 585-16, Schenectady 5, New York.

*Special ranges can also be provided.

Progress Is Our Most Important Product

GENERAL ELECTRIC

—TEXTILE FINISHERS:



CATALIN

UREA FORMALDEHYDE

LIQUID Resin 8171

ELIMINATES NEEDLESS OPERATIONS

The multiple manpower operations required to handle, measure and mix paste-form crease resistant finishes are money-consuming and time-wasteful! Furthermore, no batches thus made can compare in uniformity and accuracy with a *used-as-received* liquid formulation.

By turning from pastes to Catalin Resin 8171 . . . (a versatile, water-soluble, monomeric LIQUID urea formaldehyde formulation) . . . many large textile finishing plants are now enjoying important production economies, better and more uniform finishes . . . and the sense of satisfaction that comes with saving both time and money!

Catalin Resin 8171 is available only in tank car and tank truck quantities. It readily meets TBL crease-resistance specifications as applied to spun rayon fabrics and blends.

Catalin field representatives, experienced in the processing problems of the textile industry, welcome the opportunity to submit samples and discuss the cost-cutting and quality advantages of Resin 8171. Inquiries invited.

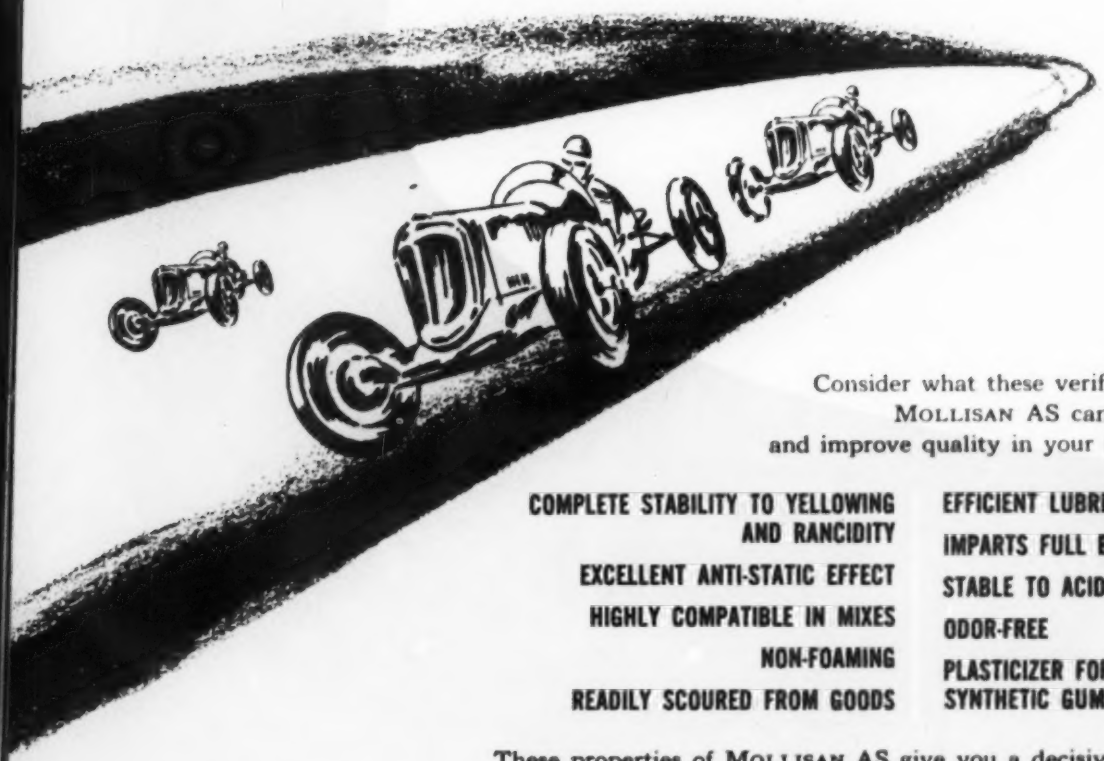
CATALIN CORPORATION OF AMERICA
ONE PARK AVENUE, NEW YORK, N. Y.

BRANCH OFFICES CHICAGO, ILL., 221 No. LaSalle Street
GREENSBORO, N.C., 630 Southeastern Bldg.

Catalin

PLANTS at FORDS, N. J.
CALUMET CITY, ILL.
THOMASVILLE, N.C.

in COTTONS you'll FINISH better with MOLLISAN AS



Consider what these verified properties of MOLLISAN AS can do to maintain and improve quality in your finished cottons:

- COMPLETE STABILITY TO YELLOWING AND RANCIDITY
- EXCELLENT ANTI-STATIC EFFECT
- HIGHLY COMPATIBLE IN MIXES
- NON-FOAMING
- READILY SCOURED FROM GOODS
- EFFICIENT LUBRICATING ACTION
- IMPARTS FULL BODY
- STABLE TO ACIDS, DILUTE ALKALIS
- ODOR-FREE
- PLASTICIZER FOR NATURAL AND SYNTHETIC GUMS

These properties of MOLLISAN AS give you a decisive edge in cotton finishing. MOLLISAN AS improves the hand and appearance of starch or resin finished fabrics; is free from tackiness; enhances sewability, abrasion resistance, tear strength and cutting ease; is effective as a calendering assistant on chintz; acts as a softener in package dyeing, and increases napping efficiency.

Your finishing operations will benefit both quality- and cost-wise with MOLLISAN AS. Ask for samples and complete data.

TEXTILE DIVISION

ONYX OIL & CHEMICAL COMPANY

WARREN & MORRIS STS., JERSEY CITY 2, N. J.

Export: ONYX INTERNATIONAL • Jersey City 2, N. J.

ATLANTA
BOSTON
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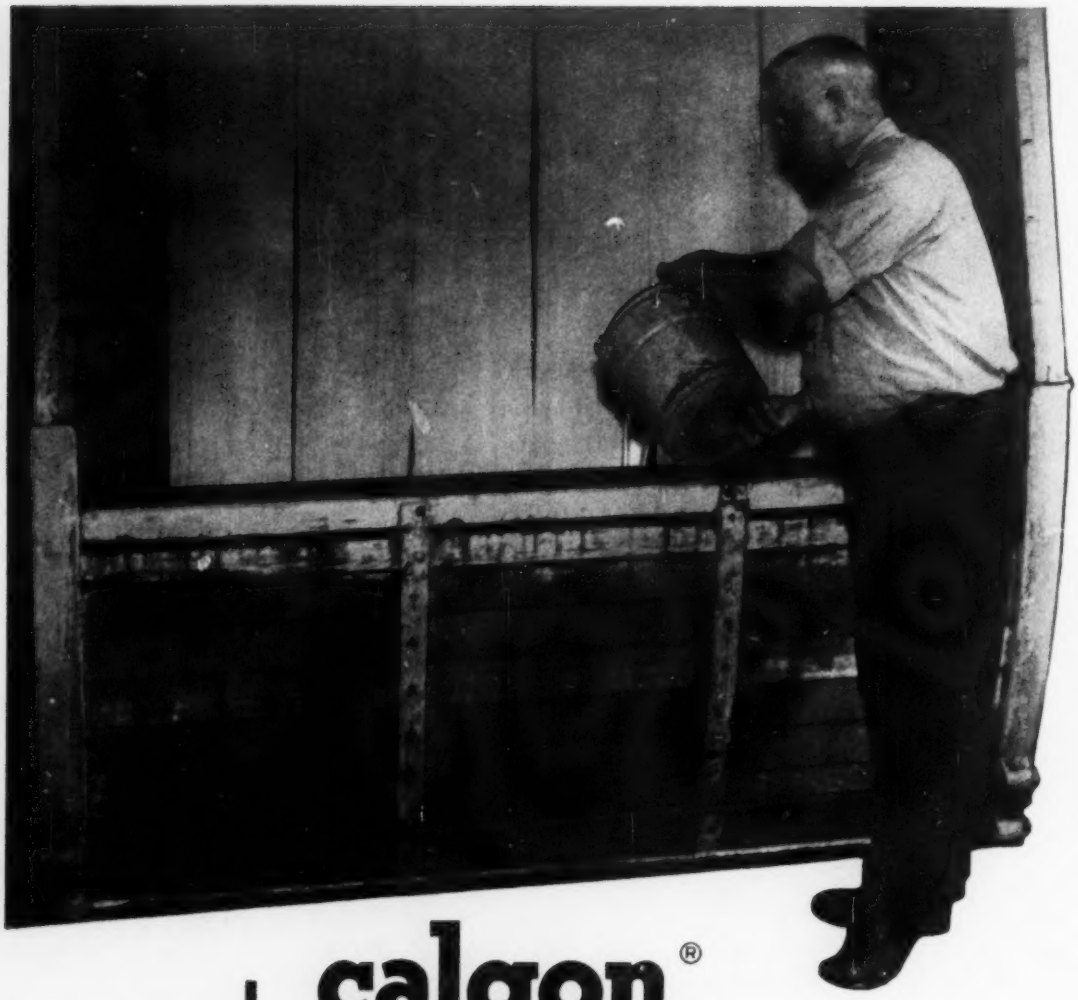
LOS ANGELES



calgon®

conditions water

makes water rain-barrel soft . . .
dissolves and reactivates lime soap

Calgon is the most effective water softener for use in scouring or rinse baths. It prevents the formation of lime soap curds, in fact, Calgon is a *solvent* for lime soap. It ties up the lime so that it can do no damage, and releases the soap for full detergent action.

Calgon is economical, too. The recommended dosage is only 1⅔ ounces per 100 gallons per grain of hardness . . . less than *any* other form of phosphate.

Calgon is a very effective dispersant, and has a solubilizing action on many dyestuffs. Calgon disperses pigments and aids the penetration of dyes in pigmented rayon.

Calgon Threshold Treatment keeps your water iron free by inhibiting corrosion in pipes and tanks and stabilizing iron or manganese dissolved in water. Calgon has demonstrated in plant after plant that its use is not an expense, but an economy. Calgon *saves* more money than it costs. Tell us about your particular problem, or send for the informative booklet, "Calgon Data for the Textile Chemist."

CALGON, INC. *A subsidiary of Hagan Corporation*
Hagan Building, Pittsburgh 30, Pa.

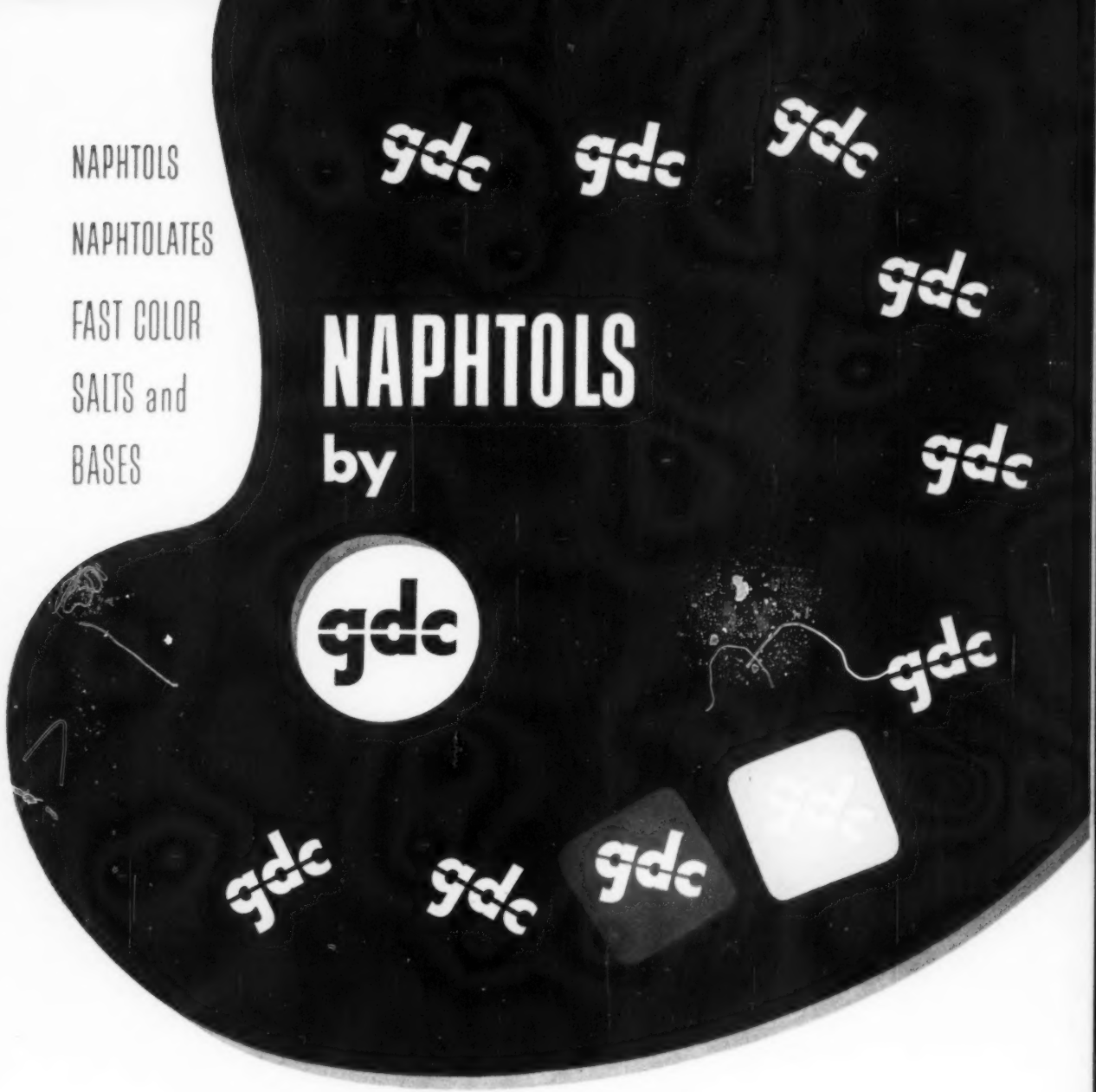
NAPHTOLS

NAPHTOLATES

FAST COLOR

SALTS and

BASES



Colors fast to washing . . . fast to sunlight

Whatever the volume of the dyer or printer—whatever his method—GDC offers the broadest range and the right combination of products to create the whole spectrum of fashion-right shades. These range from bright yellows and reds to rich deep wines, navies and browns. They are dependable allies in meeting today's ever-increasing demand for fast colors.

Years of manufacturing experience and extensive technical resources are continually at work for you—breeding new refinements into our products—creating new benefits to you. The Naphtols, Fast Color Salts and Bases are *now non-dusting* powders. Most of them offer greater ease of solubility and better stability in dyeing and printing, as well as in storage. These are all plus factors. For those who prefer to work with a prepared naphtol solution, we offer liquid Naphtolates.

Supporting every product we offer are the facilities—available to you—of our Technical Service Laboratories. We invite the opportunity to discuss the relative values of Naphtols and Naphtolates, Fast Color Salts and Bases—in terms of your particular requirements.

From Research to Reality

gdc gaf

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A SALES DIVISION OF GENERAL ANILINE & FILM CORPORATION

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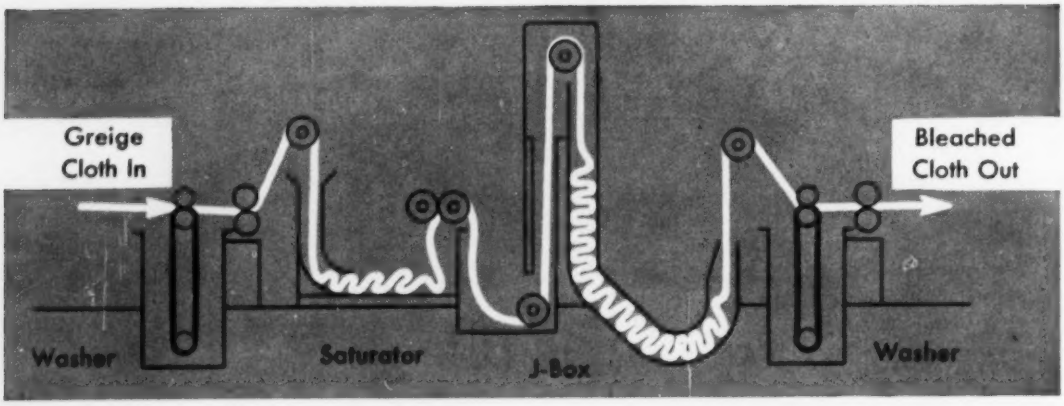

OVERSIMPLIFIED?

Not at all! With Du Pont's new one-step single-stage peroxide system

just one pass through one J-box effectively bleaches cotton woven goods

With this latest development of Du Pont practical engineering, boiling out and bleaching are handled simultaneously. This means you can cut over-all bleaching costs by as much as 20%—and still produce results equal in every way to those obtained with the older multi-stage systems.

Du Pont's compact new system enables you to maintain present production levels with half the equipment, half the floor space . . . or double production without additional equipment. Cloth distortion and abrasion from handling are minimized, and savings of up to 50% in labor, steam, water and power are quickly realized.

We'll be glad to show you how your present bleaching system can be modified to operate on this new *one-step* principle. Or, if you're planning to install new equipment, Du Pont bleaching experts will gladly show you how the Du Pont process can substantially cut the cost of your initial investment.

NOTE: *Du Pont does not build or sell bleaching equipment. However, Du Pont systems are available* now *from leading equipment manufacturers.*

Send coupon for details

DU PONT PEROXIDES

ALBONE® hydrogen peroxide, 35% and 50%

PERDOX® sodium borate perhydrate

SOLOZONE® sodium peroxide

Sodium perborate tetrahydrate

DU PONT

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BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

E. I. du Pont de Nemours & Co. (Inc.)
Electrochemicals Department AD-12
Wilmington 98, Delaware

☐ Please send full information about the new Du Pont single-step continuous bleaching system.

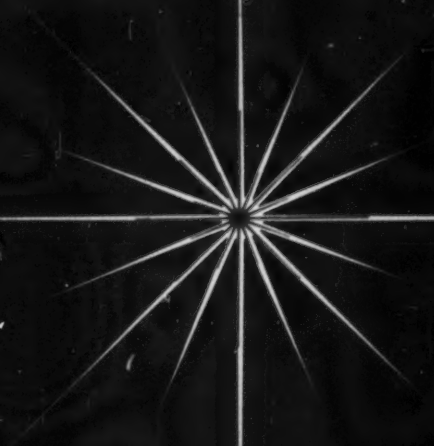
Name _____

Title _____

Firm _____

Street & No. _____

City _____ State _____



easons greetings.

It's good to contemplate

nearly 2000 years of

devotion to an ideal.

ALLIANCE

BLACKMAN UHLER CO. ALLIANCE COLOR & CHEMICAL CO.

Divisions of The Alliance Company

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The great mines . . . the refineries . . . the years of teamwork
with all brine-using industries . . . enable International
to provide the equipment, methods and know-how
to make better brine at lower cost with greater efficiency
. . . in any plant . . . for any industry.

From Sterling Rock Salt or Evaporated Salt

BRINE, AUTOMATICALLY MADE
. . . ALWAYS SATURATED
. . . PIPED TO ALL POINTS OF USE

For consultation without obligation, with a qualified International Industrial Engineer, write . . .

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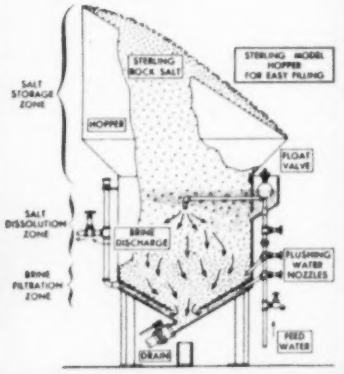
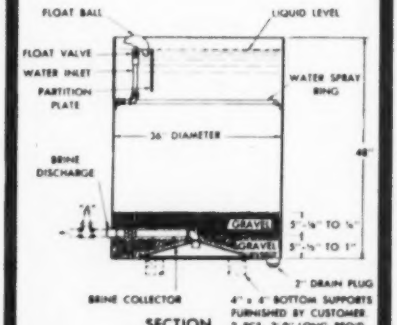
THE STERLING MODEL
LIXATE ROCK SALT DISSOLVER



THE STERLING
EVAPORATED SALT DISSOLVER



SECTION

WHAT DOES FIFTH AVENUE THINK OF HYDRO-PRUF.?

ONE OF MANY FIFTH AVENUE WINDOW DISPLAYS

Here's what Arnold Constable says: "We think HYDRO-PRUF is WONDERFUL!"

Arnold Constable's fashion show proudly presented a wide variety of fashions in silks, satins, corduroys, woolens, velvets, cottons and synthetics . . . all presented as better values because of Hydro-Pruf "the fabulous fashion fabric finish."

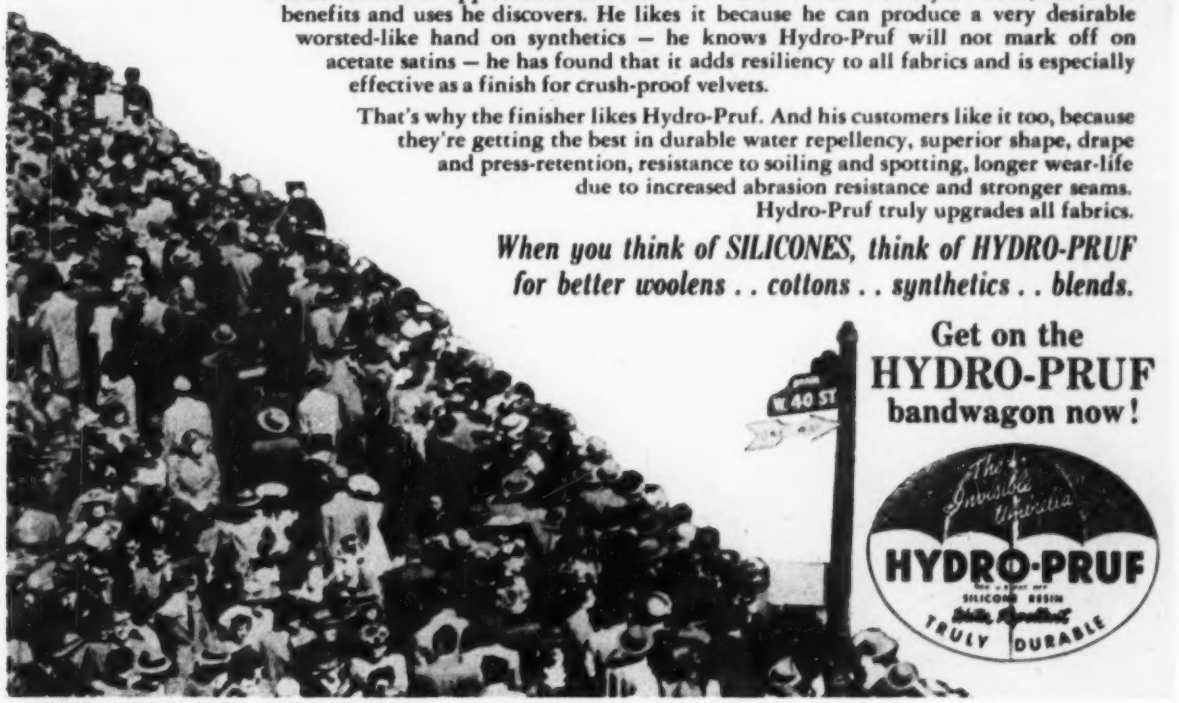
Arnold Constable has taken the Fifth Avenue lead with a national advertising and publicity program on Hydro-Pruf, backed up by their branch outlets with window displays, local advertising and publicity and departmental displays. Their buyers are going into the market specifying Hydro-Pruf. Fashion-wise Fifth Avenue demands HYDRO-PRUF!

What does the FINISHER think of HYDRO-PRUF?

Many finishers have worked with Hydro-Pruf for so long that they take for granted its wonderful ease of application. The more a finisher works with Hydro-Pruf, the more benefits and uses he discovers. He likes it because he can produce a very desirable worsted-like hand on synthetics — he knows Hydro-Pruf will not mark off on acetate satins — he has found that it adds resiliency to all fabrics and is especially effective as a finish for crush-proof velvets.

That's why the finisher likes Hydro-Pruf. And his customers like it too, because they're getting the best in durable water repellency, superior shape, drape and press-retention, resistance to soiling and spotting, longer wear-life due to increased abrasion resistance and stronger seams. Hydro-Pruf truly upgrades all fabrics.

When you think of SILICONES, think of HYDRO-PRUF for better woolens . . cottons . . synthetics . . blends.



Get on the HYDRO-PRUF bandwagon now!

The Invisible Umbrella
HYDRO-PRUF
SILICONE RESIN
TRULY DURABLE

ARKANSAS CO., INC. *Newark, New Jersey • Serving the textile industry for over 50 years*

Look to continued acetate

Eastman for advances in dyes

Eastman is the leader in developing improved acetate dyes. From the early days of acetate dye manufacture in America, to the recently announced Eastofix series of wash-fast acetate dyes, Eastman has consistently set the industry's standards of quality for acetate colors.

EASTMAN ACETATE DYES are sold in the United States by Eastman Chemical Products, Inc., a subsidiary of Eastman Kodak Company, Kingsport, Tennessee and Lodi, New Jersey. On the West Coast through Wilson Meyer Co.: San Francisco, Los Angeles, Portland, Seattle and Salt Lake City. In Canada, through Clough Dyestuff Company, Ltd., 1375 Cote Vertu, St. Laurent, Quebec.

The finest acetate fibers and dyes are made by **Eastman**

SEWING IS EASIER...
HAND IS EXCELLENT
WITH DU PONT
AVITONE*

SOFTENERS

YOU GET LUBRICATION PLUS...ON ALL-TYPE FIBERS

SPEED AND EASE . . . Sewing is easier and faster when a fabric is lubricated. ("AVITONE" lets the needle slip through the fabric, avoiding harmful fiber cutting.) Less wetting time, too, because "AVITONE" is stable to hard water.

SOFT FULL FINISH . . . Fabrics lubricated with Du Pont "AVITONE" have excellent hand. Even after lengthy storage they still look like new. With "AVITONE," fabrics won't turn rancid or discolor with aging.

AID IN SHRINKING . . . The wetting action of "AVITONE" speeds up the shrinking process and leaves your fine cottons looking softer.

• *Look into these Du Pont finishing agents. For complete information on the "AVITONE" line, simply write to: E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington 98, Delaware.*

AVITONE

SOFTENERS

DU PONT

REG. U.S. PAT. OFF.

*Reg. U.S. Pat. Off.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

WESTERN UNION

W. P. MARSHALL, PRESIDENT

SYMBOLS
DL=Day Letter
NL=Night Letter
LT=Int'l Letter Telegram
VLT=Int'l Victory Ltr.

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TO HYDROGEN PEROXIDE USERS:

RE YOUR 1956 HYDROGEN PEROXIDE REQUIREMENTS,
WOULD LIKE TO QUOTE ON SOLVAY 35-0/0 OR
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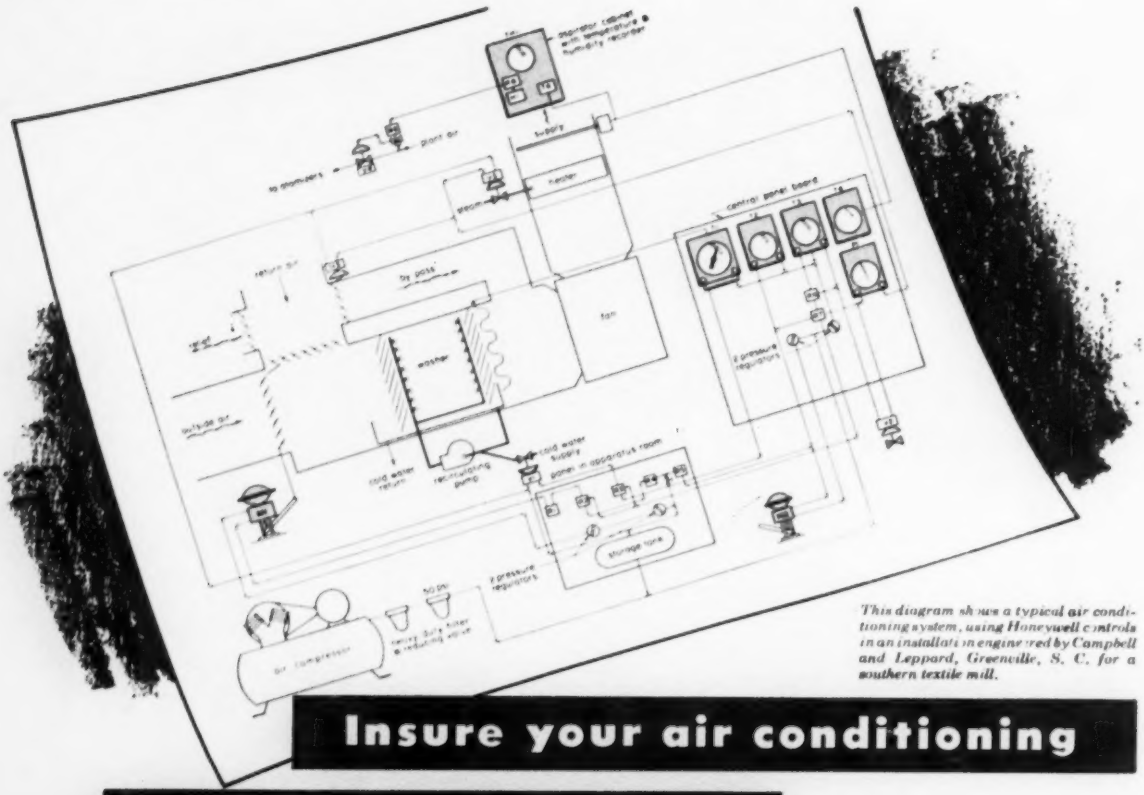
SHIPPED IN STRAIGHT OR MIXED CAR OR
TRUCKLOADS AS WELL AS LCL. WIRE, WRITE
OR PHONE SOLVAY=

SOLVAY PROCESS DIVISION
ALLIED CHEMICAL & DYE CORP
61 BROADWAY NEW YORK 6, N. Y.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

SOLVAY



This diagram shows a typical air conditioning system, using Honeywell controls in an installation engineered by Campbell and Leppard, Greenville, S. C. for a southern textile mill.

Insure your air conditioning investment . . . *with a* Honeywell Control System

IT PAYS to be as particular about your mill's air conditioning controls as you are about process instrumentation. For the precision with which air temperature and humidity values are maintained determines how well you can capitalize on the inherent benefits of modern plant air conditioning. A well-designed system *must* include the best in control . . . to give you high uniformity of strength, pliability and related characteristics of yarn . . . stability of weather-sensitive wood and leather parts in shuttles, pickers and other machines . . . constancy of size formulas . . . production-boosting comfort for employees.

Honeywell repeatedly works in close association with the consulting and contracting engineers who specialize in the development of systems to meet the specific requirements of individual installations. And, Honeywell controls can be incorporated at any stage in the engineering of an air conditioning system. Instrumentation for temperature, humidity and pressure is designed by Honeywell specialists who are qualified to make recommendations by virtue of their familiarity with the needs of the engineering and contracting organization. This experienced staff works out every detail . . . down to valve plug characteristics, interlocks and signalling devices . . . to help provide an integrated control system that will perform at peak efficiency, with minimum operating and maintenance cost.

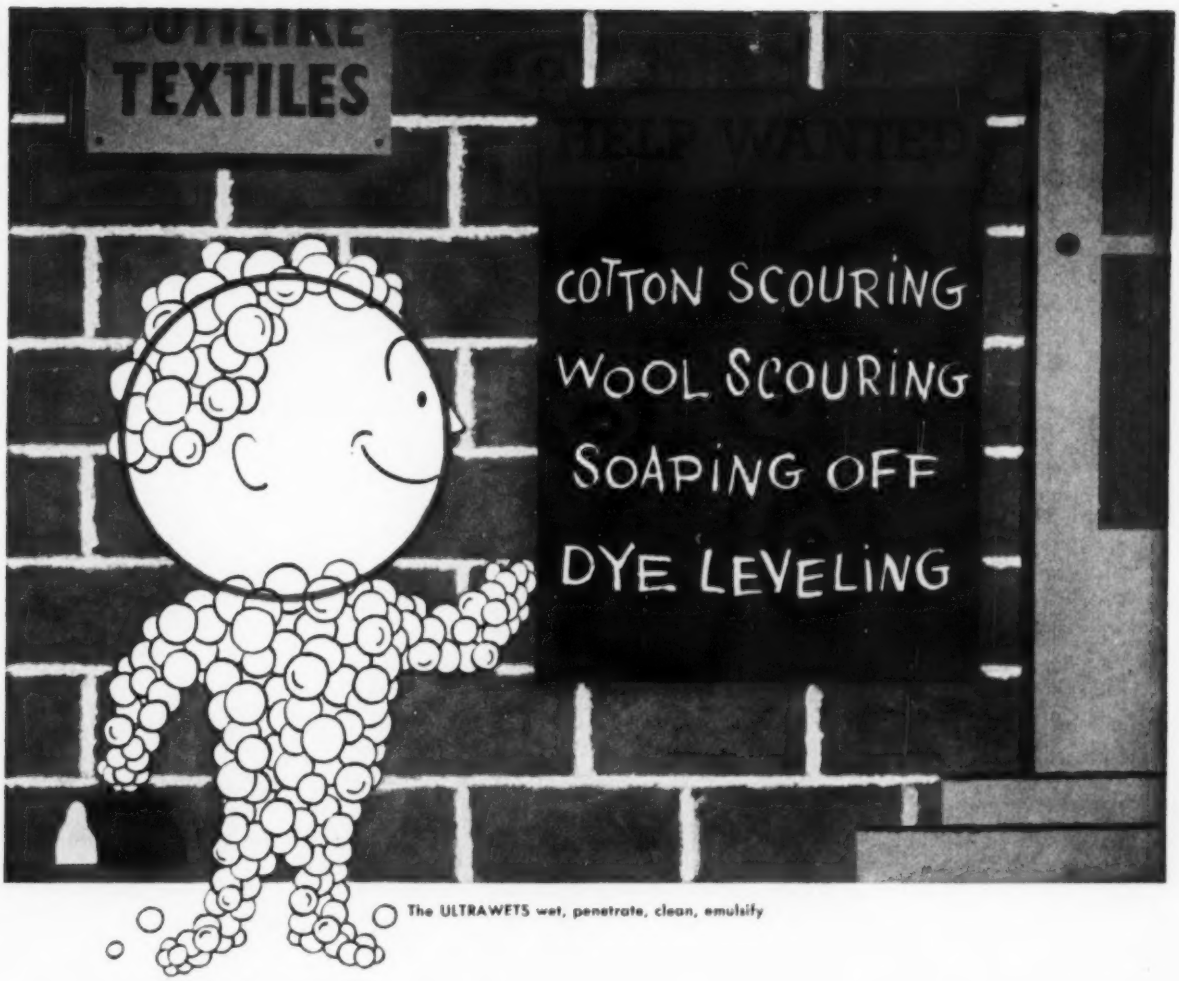
When you discuss air conditioning, make sure that your consultant or contractor has the complete Honeywell control story.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, Wayne and Windrim Avenues, Philadelphia 44, Pa.—in Canada, Toronto 17, Ontario.

MINNEAPOLIS **Honeywell**

BROWN INSTRUMENTS

First in Controls



The ULTRAWETS wet, penetrate, clean, emulsify

His skills can help you...in these tough assignments

Maybe the costs of your textile processing are running higher than they should. Maybe you're fighting the problem of hard water precipitates. Or stubborn stains that reduce product quality. Well, for these and numerous other problems, you can find up-to-the-minute answers in the ULTRAWETS. The ULTRAWETS offer you maximum performance at minimum costs.

Only economical low concentrations of ULTRAWETS are required for most applications. Because ULTRAWETS are surface active agents, with exceptional cleaning and wetting ability. They dissolve quickly in hard or soft water, hot or cold. ULTRAWETS speed penetration of liquids, hold solids in suspension, emulsify greases, and oils.

Investigate the advantages of the ULTRAWETS. Available as a flake or bead in drums and bags . . . or as a liquid, to give you easier handling, and the economy of bulk shipments. Our sales engineers can work with you to help determine the formulations that will give the best results. For information, send coupon or write.

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THE ATLANTIC REFINING COMPANY
Dept. F-12, Chemical Products Sales
260 SOUTH BROAD STREET, PHILADELPHIA 1, PA.

Please send me information on the ULTRAWETS for use in ☐ Cotton Scouring, ☐ Wool Scouring, ☐ Soaping Off, ☐ Dye Leveling.

Name _____
Firm _____
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City _____ State _____

The Standard of Color Perfection

SINCE

1876

Camel

TEXTILE

Dyes

Three-quarters of a century has built the name of Camel into a symbol of dependability for textile dyestuffs—75 years of uninterrupted service to the industry as a background of experience for prompt, efficient attention to all textile dyestuff requirements and problems.

Refer your dye problems to our laboratories . . . capable, experienced engineers are ready to serve you.

John Campbell and Company

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2520-22 N. BROAD ST., PHILA. 32, PA.—RAdcliff 5-7103

BRANCH OFFICES & WAREHOUSES: BOSTON • EAST CLEVELAND, OHIO • ATLANTA, GA.

with **METAPERM KGS**

This amazing new product by Metro-Atlantic . . . originators of water phase printing of gold and silver metallics . . . is revolutionizing the entire metallics printing field.

METAPERM KGS is a vastly improved, highly stable resin mixture developed especially for printing metallics in the water phase. This new product is easier to run in that foaming, drying out, and sticking in the engraving have been eliminated.

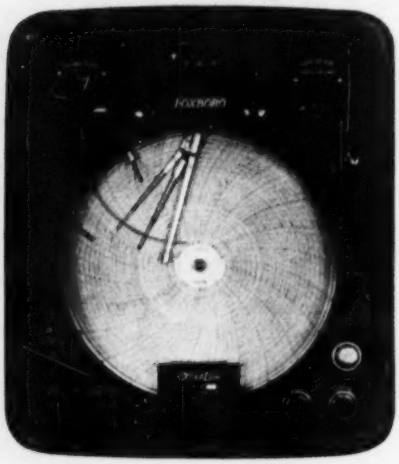
METAPERM KGS forms a tough, pliable, insoluble film by just can drying . . . therefore it is not necessary to age, cure and wash to obtain lifetime fastness to laundering and dry cleaning. Eliminated, too, are the solvent hazards, the special engraving with special ground, and all the other difficulties normally found in metallic printing.

Improve your metallic printing methods, now . . . and give your customers a superior product. Write, phone or wire today for complete technical data. Ask for a test run at your convenience.

METRO-ATLANTIC INC.

Chemicals, Dyes and Intermediates
Manufacturing Plant and Main Offices — Centredale 11, Rhode Island
Offices and Warehouses: Greenville, S. C., Fairlawn, N. J.
Canadian Branch: Granby, Quebec
Imported Dyestuff Specialties: Farbwerke Hoechst AG, West Germany

TOP NAMES IN TEXTILE DYEING NOW USE CYCLELOG CONTROLLERS



When leading companies like those listed at the right adopt a new and unique instrument, there must be a good reason. Yet this is only a partial list of today's CycleLog* users!

Whether you're dyeing wool, cotton, rayon, nylon or other synthetics, or blends—piece goods, skeins, tops, packages, raw stock, hosiery, slubs, or even tufted carpet—the CycleLog gives you the most completely automatic control ever developed.

You can control from a distant dye house office, or at the kettle. No matter what your dyeing temperature schedule may be, it is easily and precisely set up, in a matter of seconds, by turning the knobs on the face of the instrument. No cams! And pushing a button starts, or repeats, any cycle.

Write for Data Bulletin 220-70, and let us make recommendations for your particular problem. **The Foxboro Company, 2912 Norfolk Street, Foxboro, Mass., U.S.A.**

* TRADE MARK

A. & M. Karagheusian, Inc.
Alexander Smith, Inc.
Bachmann Uxbridge Worsted Corp. (Uxbridge Worsted Co.)
Barre Wool Combing Co., Ltd.
E. T. Barwick Mills
Bishopville Finishing Company (A Division of Reeves Bros., Inc.)
Bradford Dyeing Assn. (U.S.A.)
Cabin Crafts, Inc.
Chatham Manufacturing Co.
Clearwater Finishing Co. (United Merchants and Manufacturers, Inc.)
Crown Manufacturing Co.
Cyril Johnson Woolen Co.
Dan River Mills, Incorporated
Davenport Hosiery Mills, Inc.
Delta Finishing Co.
Dorlexa Dyeing & Finishing Co.
Erie Dyeing & Processing Co.
Excelsior Finishing Plant (Deering Milliken)
F. C. Huyck & Sons (Kenwood Blankets)
Fieldcrest Mills
Globe Dye Works
Goodall-Sanford, Inc.
Hans C. Bick Co., Inc.
Hayward-Schuster Woolen Mills, Inc.
Holly-Knit, Inc. (American Yarn & Processing Co.)
Jantzen Knitting Mills
Julius Forstmann & Co., Inc.
Kendall Mills Division of The Kendall Co.
Lippitt Worsted Mills, Inc.
M. T. Stevens & Sons Co. (J. P. Stevens & Co., Inc.)
Newnan Cotton Mills
Pearce Manufacturing Co.
Peerless Woolen Mills
Pohatcong Hosiery Mills, Inc.
Portland Woolen Mills
St. Marys Woolen Manufacturing Co.
Standard-Coosa-Thatcher Company
S. Streock & Co., Inc.
United Piece Dye Works
Woonsocket Falls Mill
Woonsocket Spinning Co., Inc.
Wyandotte Worsted Co.

FOXBORO REG. U.S. PAT. OFF. **CYCLELOG CONTROLLERS**

FACTORIES IN THE UNITED STATES, CANADA AND ENGLAND

HOW NEW KELTEX S

eliminated machine stoppages in 2 textile print plants!

PROBLEM OF PLANT #1

This print plant was having recurrent gelation in its insoluble Azos Print Pastes, due to high caustic soda concentrations.

SOLUTION

On test, this plant found print pastes made with new Keltex S remained smooth and free flowing, even with highly alkaline print paste formulas.

Since introducing new Keltex S into its formulations, this plant has not experienced any gelation!

Plant Superintendent writes: "Your new Keltex S helped us a great deal, and we like the easy way it handles."

PROBLEM OF PLANT #2

Plant printing insoluble Azos and soluble vats encountered gradual gumming up of rollers when these colors were printed alongside of pigments. This necessitated frequent shutdowns to wash down rollers.

SOLUTION

Plant introduced new Keltex S into its print paste. Gumming of 2 rollers has been eliminated. Plant has since used several thousand pounds of new Keltex S and has not had a single shutdown, due to gumming up on rollers.

Colorist of Plant states: "New Keltex S sure solved a serious plant problem for us, and our production efficiency is now the highest ever!"

NEW KELTEX S is versatile, gives excellent performance in roller or screen printing. It is the only sodium alginate print paste specifically engineered and formulated to tolerate caustic soda without buffers. New Keltex S needs no polyphosphates or other water conditioners. Cuts your costs substantially. Provides extra viscosity for extra protection.

Test-prove new Keltex S for yourself. Please write our nearest regional office today for complete information and laboratory sample of new Keltex S, without obligation.

20 N. Wacker Drive, Chicago 6, Ill. *120 Broadway, New York 5, N. Y.* *530 W. Sixth Street, Los Angeles 14, Calif.*
Cable Address: Kelcoalgin — New York

Formulas FOR *Fabulous Fabrics*

Textile Finishes

from

JERSEY STATE CHEMICAL CO.

59 Lee Avenue Haledon, N. J.

Write Today for Complete Information

Southern Representative: Charlie Waters
3919 West Grace St., Richmond, Virginia

REPCO RF

Combines ribbon finish and water repellent into a single product for a single application. No curing necessary, dries at normal drying temperature. Eliminates mark-off.

JESCO #50

A Cationic softener obtaining a full soft hand. Excellent permanency and resistance to laundering and dry cleaning. May be used on all fibers, with negligible effect on white and colors.

FINISH S #33

A softener and plasticizer for use with Urea Formaldehyde and Formaldehyde Resins. Makes resin finishes softer by reducing harshness and brittleness—yet retains crease resistance and stability.

JESCO D-6

A high quality answer to the problems of greige goods scouring and boiling off. Equally efficient in acid solutions, hard water, alkaline baths. Excellent stability under all temperatures and conditions.

JESCO 59W

A combination of finishing gums for imparting body, weight and a firm hand to goods—especially low count fabrics. No discoloration of whites or dyed fabrics. Readily water soluble. Improves draping qualities.

PINETEX

The ideal detergent for cotton, rayon, blended synthetics etc. requiring rapid boil-off. Contains no tallow oil soap. Perfectly stable in high alkaline baths. Excellent for Jig box use and in many oxidizing agents.

RESIN 300

A modified Urea Formaldehyde providing an extremely crisp finish of excellent dimensional stability. Ideal for crush-proofing nylon, dacron and orlons.

RIBBON FINISHES: RESIN RF and RESIN 112

High quality alkyd resins which impart a crisp, firm hand to acetate satins. RF and 112 provide excellent results without mark-off or decrease in original lustre.

RESIN SYRUP J5

A high solids Urea Formaldehyde Polymer for imparting a desirable firm hand to suitings.

RESIN 107

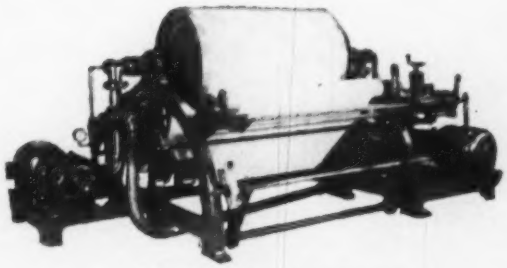
A 55% polyvinyl acetate emulsion for fabric stiffening. Ideal for cottons, nylons and ninons.

FINISHING SCHOOL for FABRICS

Your fabrics finish highest in their class and win quick customer acceptance when they get the finishing touches of beauty added by Van Vlaanderen machines. Long association with the needs of dyers and finishers has given our engineers know-how in designing and manufacturing superior equipment.

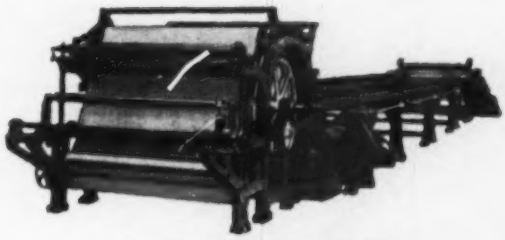
The machines shown below are representative of the full line of Van Vlaanderen equipment for preparing, dyeing and finishing modern fabrics. Ask us for full information.

THE V.V. DECATERS. The better hand, richer color and evener finish given by decating add sales appeal to your fabrics at a cost that scarcely need be considered. Pioneers in building decating machines, Van Vlaanderen offers the standard single pump machine or the dual pump machine (for faster cooling of heavier cloths, resulting in higher production). Your first choice will be a Van Vlaanderen Decater after making comparisons.



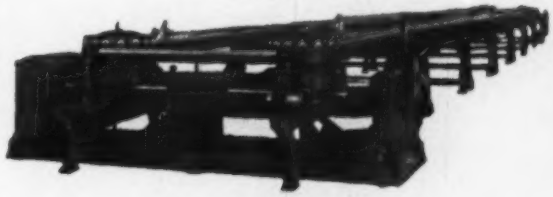
V.V. DUAL PUMP DECATER

The **V.V. PALMER-TENTER UNIT** provides an advanced range for continuous finishing, chemicising and impregnating rayon, acetate, synthetic and natural fibre broadgoods. It is the ideal combination for delivering the greater production and finer quality necessary today. Built to the Van Vlaanderen standard of rugged dependability. The individual machines are also available separately.



V.V. PALMER-TENTER UNIT

V.V. TENTERING FRAMES are known for quality work and economical operation. Massive ruggedness and advanced engineering give smoother performance, increased machine life and better production. Precision lathe-type beds and heavy cast-iron rails and cross girts are built to resist the severest punishment of thousands of pounds of rapidly moving clips and the high temperatures often used in tentering.



V.V. HEAVY DUTY TENTER

VAN VLAANDEREN

VAN VLAANDEREN MACHINE COMPANY

370 Straight Street, • Paterson 3, New Jersey

In the South — Parrott and Ballentine • 610 South Carolina National Bank Building • Greenville, South Carolina

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WORLD'S LARGEST MANUFACTURER OF MACHINES FOR PROCESSING MODERN FABRICS

HOECHST
DYESTUFFS

Among the new products invented and solely manufactured by Farbwerke Hoechst AG. are four vat dyestuffs which are chemically different from the commonly used thioindigo brands.

* **VAT BRILLIANT ORANGE GR**
VAT SCARLET H4G
VAT PRINTING BROWN HRR
VAT BORDEAUX HRR

Unlike thioindigos, these dyestuffs *do not tender* cotton during prolonged light exposure. Their chemical constitution assures *high affinity to cotton* and a *very quick re-oxidation*. In printing they show therefore much less tendency to flush or bleed into the white in case of incomplete oxidation before soaping. They also *stand up better in discharge printing* than thioindigo dyes when strong alkaline discharges are used on Naphtol dyeings. They are *much faster to light* than thioindigo brands, are *fast to chlorine*, show *very good money value* and are *suitable for the "Everglaze"* article.

**In all other countries but the United States these brands are sold under Hoechst's trade name "Indanthren".*

PROGRESSIVE
COLOR AND CHEMICAL CO., INC.
350 FIFTH AVE. EMPIRE STATE BLDG.
NEW YORK 1, N. Y. TEL. CH 4-5610
and
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MONTREAL, CANADA

REPRESENTATIVES OF
FARBWERKE HOECHST AG.
FRANKFURT—HOECHST
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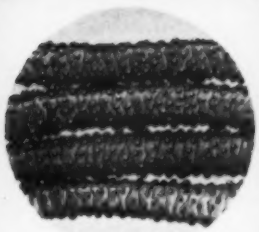
HOECHST

SYTON locks low-end weaves without making them "boardy"

Friction?
YES!

Tackiness?
NO!



Syton is an odorless, translucent, pH-stable silica sol for use alone or with other finishes. It deposits on fibers in millions of submicroscopic particles. They hold fibers in place, enable you to "antislip" yarns without binding them together.

Syton Reg. U. S. Pat. Off

Delusters and improves quality of many fabrics

Perhaps you're after a low sheen (without frosting) or a dry, "worsted" hand on your fabrics. Syton can handle that, too. It works wonders with cotton, wool, synthetic fibers and blends.

Syton controls fabric distortion during finishing and in use. By varying the amount you can improve the hand of such materials as nylon marquisettes, rayon linings, satins, ribbons, rayon-wool blends, and glass fibers.

Monsanto Technical Bulletin No. I-110 tells all about Syton in textile finishing. Phone the local Monsanto representative now, or write: MONSANTO CHEMICAL COMPANY, Inorganic Chemicals Division, 710 North Twelfth Blvd., St. Louis 1, Missouri.

MONSANTO
CHEMICALS – PLASTICS

SERVING INDUSTRY, WHICH SERVES MANKIND

But, Mr. Woolen Manufacturer,

You don't have to "live with" STATIC

Now with NOPCOSTAT 56-C you will discover a wool oil with "built-in" anti-static properties PLUS detergency for easiest scouring

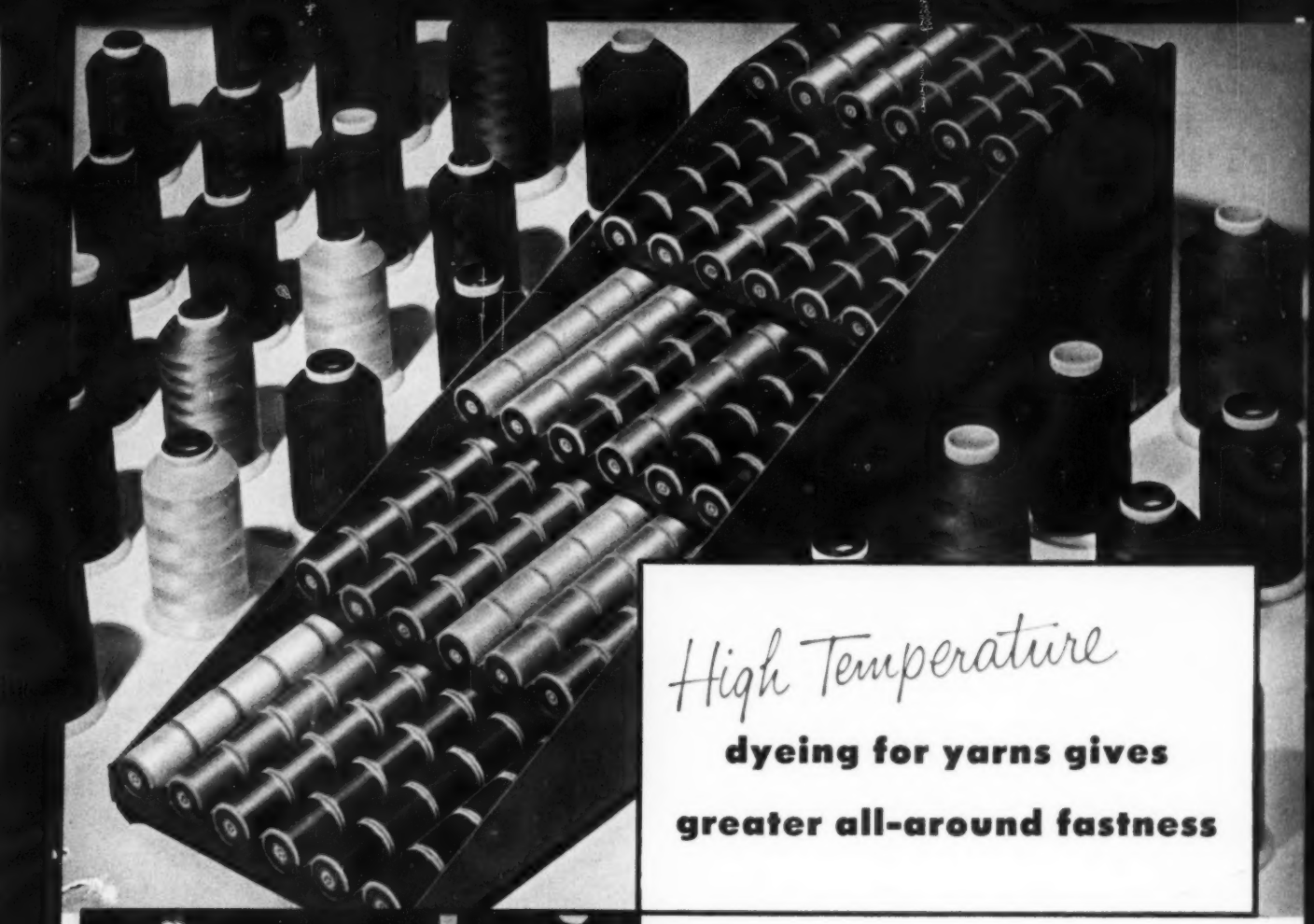
NOPCO

PLANTS: Harrison, N. J.
Cedartown, Ga. • Richmond, Calif.

Many companies often make extravagant claims for their wool oils. Nopco doesn't believe in extravagant claims. But if you are one of the many woolen manufacturers who have been assuming that static is something you just have to live with—since you can't eliminate it economically—we're sure you have everything to gain by trying our new wool oil, Nopcostat 56-C.

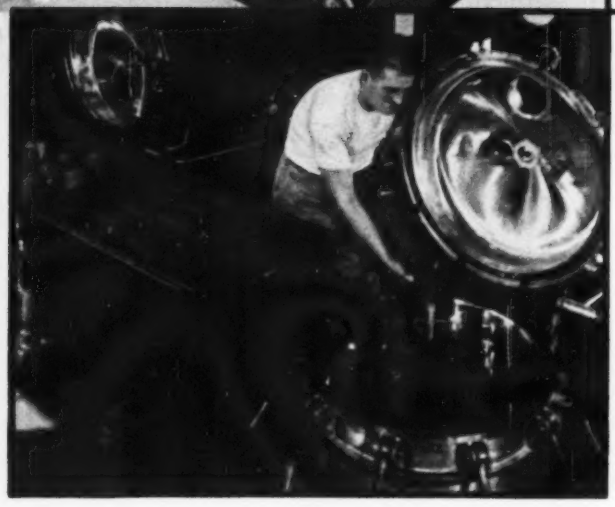
Nopcostat 56-C is a wool oil about which we are, truthfully, extremely optimistic. The combination of built-in anti-static qualities for trouble free running *PLUS* supplemental detergent action for optimum finishing and fine, clean fabrics put Nopcostat 56-C in a class by itself.

But what we *say* about Nopcostat 56-C won't really convince you. One trial in your mill will, we are sure, prove to you that our great enthusiasm for this new wool oil is well deserved. Make us prove it!



High Temperature

dyeing for yarns gives greater all-around fastness



Stock and piece dyeing of the newer hydrophobic fibers at 250°F. was developed successfully by Du Pont research working with a number of dyers. Now — a similar method for dyeing yarns of synthetic fibers has proved its value.

High-temperature dyeing has overcome fastness problems for many different types of yarn. The installation shown at left is operated at the American Thread Company. Increased rate of diffusion of dye into the fiber cuts dyeing time considerably, gives better fastness.

Developed and used so far only for synthetics, Du Pont is continuing research on applications of this method to other fibers. If you would like more complete information on high-temperature dyeing, contact your Du Pont representative or write to E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington, 98, Delaware. In Canada — Du Pont Company of Canada Limited, Montreal, P. Q.

Improved results with high-temperature yarn dyeing:

for **NYLON**—color is uniform through each layer of the package. Further, when chrome colors are used, chroming time and quantity of sodium dichromate are both cut, yet still give complete chromation and highest wet fastness.

for **"DACRON"***—need for a chemical carrier is eliminated, which cuts costs. Color buildup is excellent, giving deep, bright colors with no spotting or streaking, no loss of light fastness.

for **"ORLON"****—a complete range of shades is now possible for the first time. High-temperature dyeing is the only method that gets dye completely into filament "Orlon."

Du Pont Dyes

DU PONT

REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

**Du Pont trademark for its polyester fiber **Du Pont trademark for its acrylic fiber*

Celanese

Reg. U.S. Pat. Off.

CHEMICAL FIBERS & YARNS

KNIT FABRICS

CHEMICALS

PLASTICS

CELLULOSE

Celanese Corporation of America
180 Madison Ave., New York 16, N. Y.

What is the Meaning of

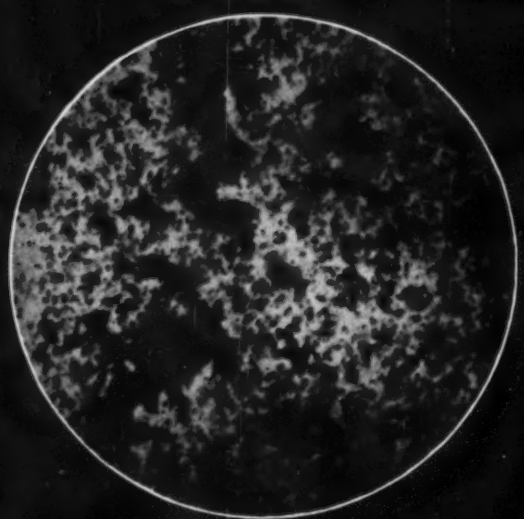
MICROFINED?

The trade-mark MICROFINED has been established to describe the unique characteristics, such as superfine and uniform particle size and perfection of dispersion, that are imparted to CIBANONE vat dyes by the original and exclusive CIBA manufacturing processes.

CIBANONE vat dyes are not just ordinary vat dyes. They are *better vat dyes*, with distinguished qualities that are described for convenience by the word MICROFINED and are readily demonstrable in improved plant performance—trouble-free continuous runs, reduction of specking on light colored goods, and better penetration of tightly woven materials. In such ways and many others CIBANONE vat dyes prove that MICROFINED is not only a word but also an effective key to happy working, superior results, profit and success.

PHOTOMICROGRAPHS SHOW THE DIFFERENCE

Ordinary



MICROFINED

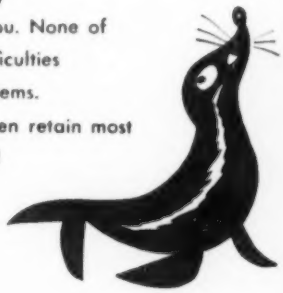
C I B A

pioneers in the production of faster dyes.

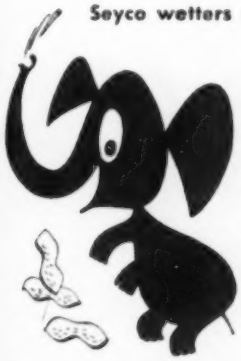
SEYCO chemicals prove their pedigree

Add new luster to Merchandising!

There's a Seyco quality-controlled agent for you. None of these agents cause difficulties in caustic recovery systems. Non-cresylic agents even retain most of their wetting power!



Seyco wetters do a big job for peanuts!



Seyco chemically stable multi-purpose wetter gives uniform high-speed wetting! There's one with highly efficient foam reducer, too.

Talk about rapid absorbency

for "sanforized" fabrics! Seyco re-wetters are versatile, rapid; give uniform results. Tell your Seyco Man what you're after. He has the answer.

Gives goods a kitten-soft hand!

More interested in full, soft hand, luster or sheen finish, or good drape? There's a Seyco softener for all three.

Helps goods bleach white as a Penguin's vest!

Thoroughly penetrates fibers to give fine, white, absorbent bottom. There's a Seyco formula for bleaching and kiering as well as dye bath.

Goods come clean in a Seyco detergent bath.

Seyco-terge A is the most effective detergent for textile purposes. There's a Seyco detergent for greasy, oily goods, wool and synthetics!

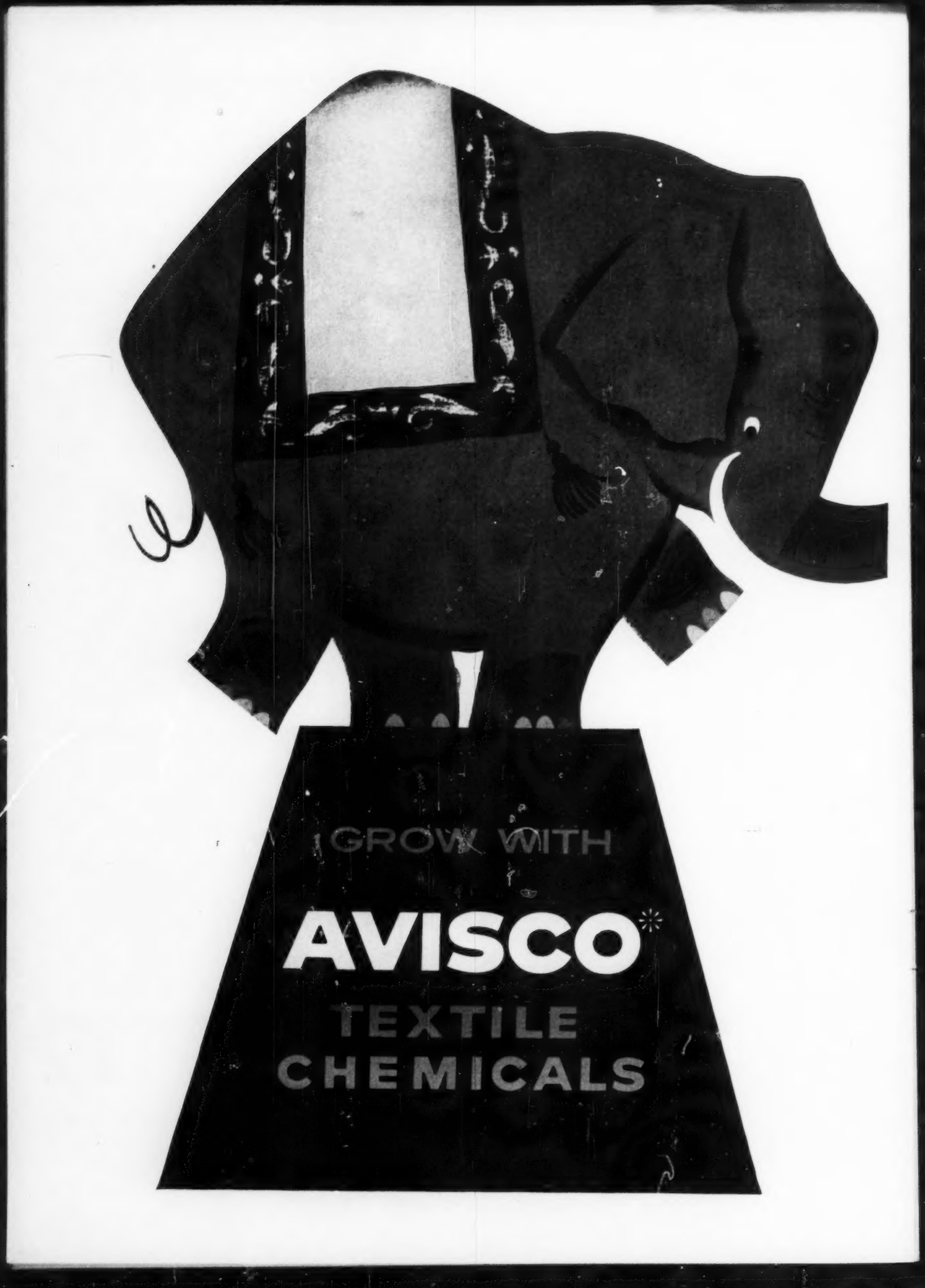
Warp Sizing: Softeners, Binders, Penetrants, Ty-In Penetrants, Shuttle Dressing, Waxes.
Wet Processing Chemicals and Auxiliaries: Dye Assistants, Penetrants, Rewetting Agents, Sanforized Fabric Oils, Detergents, Scouring Agents, Softeners.
Niagara Twist-Setter: Yarn Conditioning Penetrants.
Seyco Warp Lubricator.

For more information, write, wire or call, giving your specifications.

Headquarters for textile chemicals

SEYDEL-WOOLLEY & CO.

748 Rice Street, Atlanta, Georgia


GROW WITH
AVISCO*
TEXTILE
CHEMICALS

the AVISCO idea is different

In our chemical division we have a different idea. We want to sell chemicals, sure! But our primary purpose is to develop or recommend chemicals that will help you lick an old production difficulty—or build a new quality into your textiles.

With that accomplished, growth—for you and for our Avisco staple and yarns—accelerates rapidly! We'd like very much to have a talk with you. Write or telephone Textile Chemical Sales, American Viscose Corporation, 1617 Pennsylvania Blvd., Philadelphia 3, Pa.

AVISCO
TEXTILE CHEMICALS

*Avisco is the trade mark of American Viscose Corporation

ENGINEERED AND BUILT BY

PERKINS

for the TEXTILE Industry

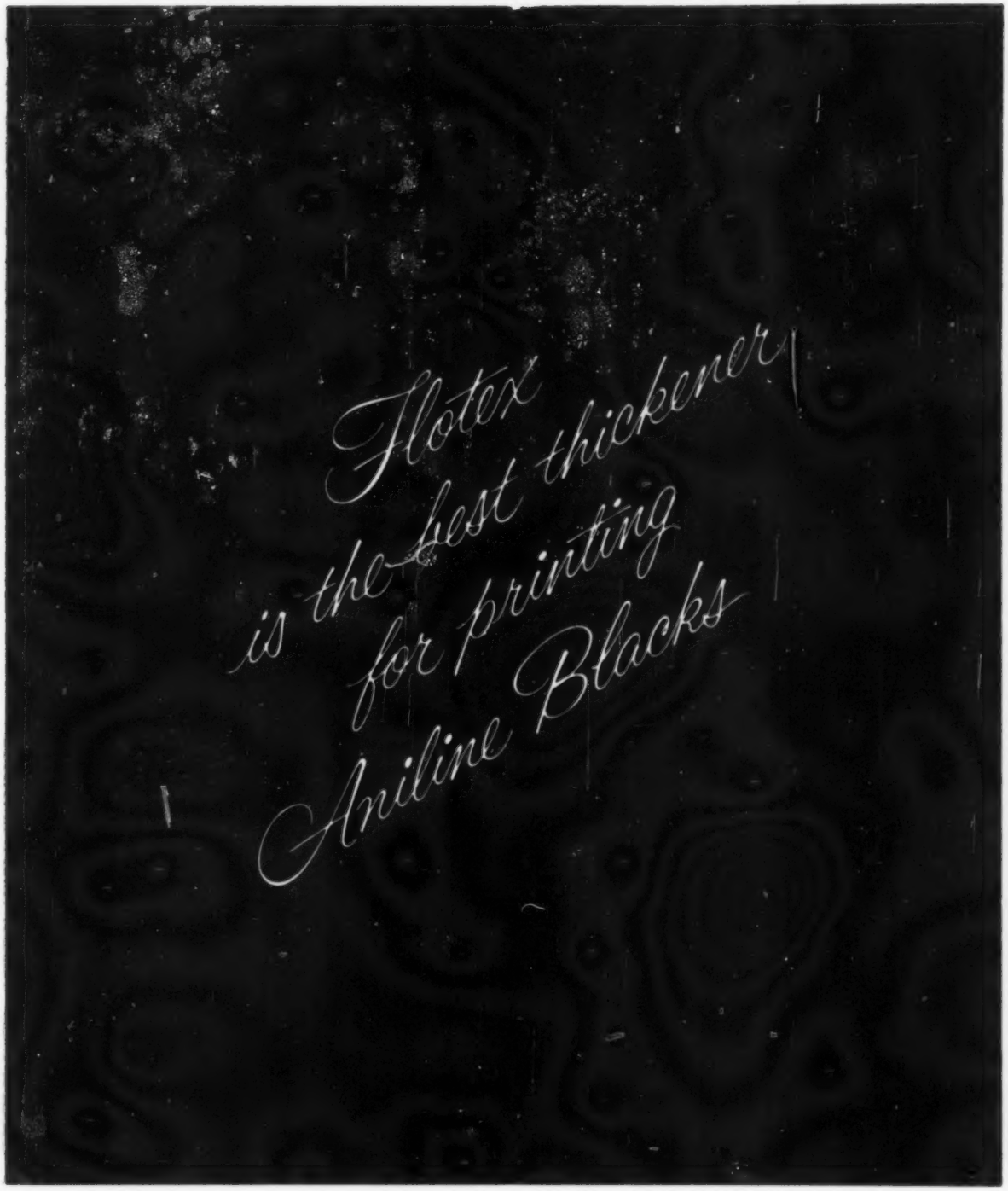
Cotton Rolls
Cotton and Wool Rolls
Combination Rolls
Cotton and Husk Rolls
Paper Rolls
Embossing Rolls
Friction Rolls
Schreiner Calenders
Chasing Calenders
Rolling Calenders
Silk Finishing Calenders
Embossing Calenders
Calenders for finishing woven plastic (Saran)
Rubber Thread covering Machines
Vinyl Embossing Calenders for Plastic Sheeting

Seam and Slub Detectors
Perkins new Electraumatic Seam Detector (for Shearing Machines)
Cloth Pilers
Special Drying Machines
Mangles
Padders
Squeezers
Automatic Winders
Dye Jigs
Hydraulic Power Units
Mullen Testers

Special Rolls and Machinery to Customers' Specifications

B. F. PERKINS & SON, INC.
HOLYOKE • MASSACHUSETTS
SOUTHERN SALES OFFICE • 1000 LIBERTY LIFE BLDG • CHARLOTTE • NORTH CAROLINA

LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD



National
STARCH PRODUCTS

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"The exception proves the rule". Whether fast delivery, uniform quality or technical service loom biggest at any given moment, we believe you'll be happy doing business with Westvaco. For Westvaco has that unique combination of "big company" output, efficiency and quality-control along with "small company" personal service in handling your orders.

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A Scientific Approach to Pollution Control

This is the second in a series of advertisements based on a technical paper by B. W. Dickerson, Sanitary Engineer, Hercules Powder Company. A complete copy of the report or additional technical data on CMC Warp Size can be obtained by writing direct to Hercules.

Where does pollution in textile mills begin? Sanitary engineers today know that up to sixty per cent of BOD (Biochemical Oxygen Demand) pollution is a result of the desizing operation. They also know that the starch normally used as a warp size and subsequently removed by enzyme extraction and hot water builds up the BOD in finishing mill waste discharges. Such knowledge provides a real starting point for any pollution control program.

Considerable interest in the past has been shown in the use of substitutes for this starch and many synthetic film-formers have been evaluated. While these materials have proved satisfactory substitutes for all or part of the starch used in warp sizing, their high cost has made their use impractical.

Hercules' CMC Warp Size, while higher in cost than starch, is less expensive than other synthetic film-formers. Its use also permits substantial reductions in solids add-on. In many instances it decreases the amount of water used in desizing, and eliminates the need for enzymes in the desizing process.

Because of its unusually low BOD value, CMC Warp Size permits significant reduction in pollution load. When used alone in sizing, the resultant BOD has been cut by 98 per cent. When used in combination with starch, CMC Warp Size, because of its excellent film-forming properties, appears to coat the starch molecules with a film that makes them resistant to bacterial action during the early stages after mill wastes are discharged into the stream. Thus, such CMC Warp Size starch wastes move downstream to larger, fast-moving water before developing a BOD load sufficient to contribute to pollution.

Where over-all reductions up to 30-40 per cent in the pollutional load are required, a 2 to 1 starch-CMC Warp Size combination provides the necessary reduction in BOD without capital outlay for treatment equipment. Where larger reductions are required, the use of the starch-CMC Warp Size combination means a substantial reduction in the size of the treatment plant required and can reduce operating and financing costs of such a plant by as much as fifty per cent.

Virginia Cellulose Department

HERCULES POWDER COMPANY

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OK HUBCO PRINTING GUM #30FL provides a very sharp line, and shows excellent compatibility with alkali as well as acid colors. One of the most economical of all printing gums, it may be cooked on a Votator or in a kettle continuously at temperatures up to 185° F.

OK PRINTEX #200 is a premium-type printing gum which gives unusual color value and sharpness. Extremely heavy bodied, it is effective at low concentrations. Its excellent rinsability produces cloth with a soft hand.

OK LVL GUM virtually assures perfection in Plisse printing. Used as a thickener and carrier for the alkali, it has amazing stability and does not lump.

OK HUBCO #110 is a very clear, thin finishing starch, giving a nice hand without masking or hiding colors of the cloth.

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Box 346-A
Piedmont, S. C.
(Phone: Greenville 2-0424)

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Working closely with textile manufacturers and finishers, Olin Mathieson offers invaluable assistance through a long-range program of *coordinated planning and production*. This assures the availability of chemical raw materials regardless of changing market conditions; assures adequate chemical production to supply growing industrial capacity; speeds the development of new chemical products and processes; provides greater flexibility in shipping and handling of materials; provides the personal attention of recognized product experts backed by widely diversified research facilities.

Currently, a growing number of chemical consumers are coordinating their planning and production with Olin Mathieson . . . America's prime producer of basic industrial chemicals. Olin Mathieson's long experience and familiarity with the broad market picture will prove invaluable in your planning. Why not consult with us *now?*

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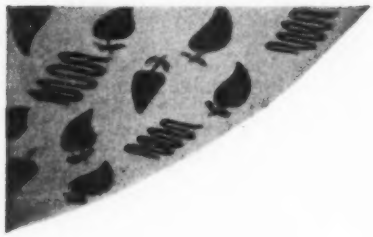

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RHOZYME LA is the most dependable desizing enzyme now available to the textile industry.

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For the full story on this low cost, highly efficient agent, write for our technical bulletin.

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AMERICAN DYESTUFF REPORTER

Devoted to Textile Chemistry
BLEACHING · DYEING · PRINTING · FINISHING

Annual Processing Review Number

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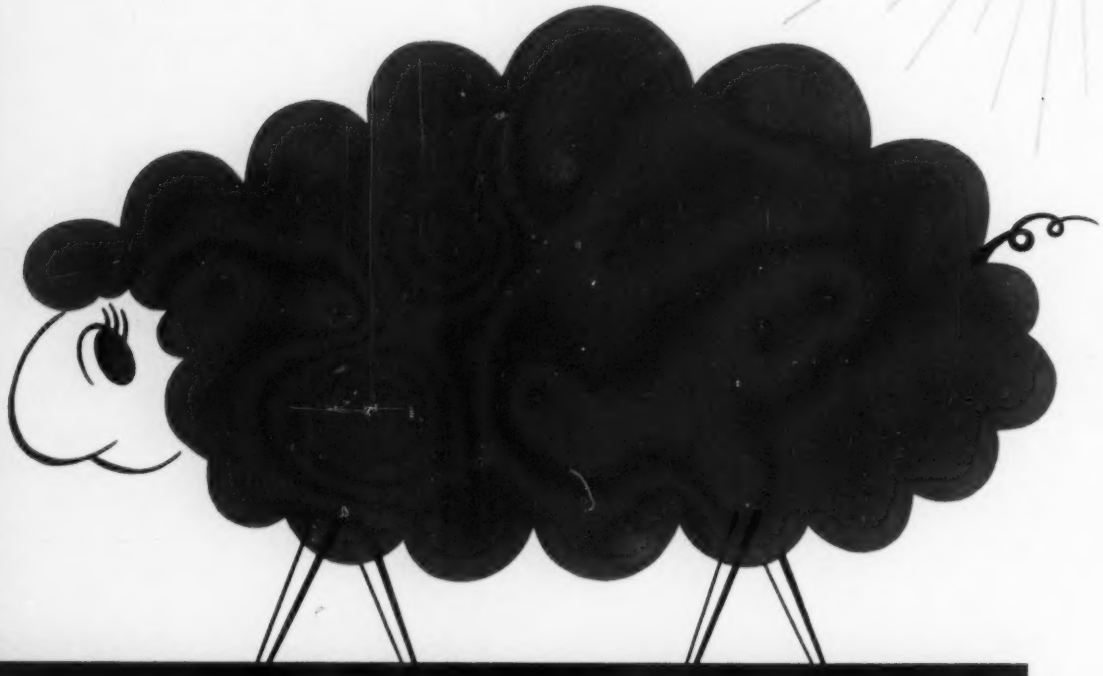
for Wool and mixtures that are "safe in the sun"



NATIONAL CHROMOLAN® RED GRE

In all strengths National Chromolan Red GRE has many desirable properties that commend its use on wool and as a union dye on nylon-wool mixtures. This low pH pre-metallized color produces moderately bright shades of yellowish red with very good to excellent fastness to light, washing, perspiration, carbonizing and cold water bleeding.

A good money value, National Chromolan Red GRE deserves a place in your wool and wool-mixture dye formulations. A working sample will demonstrate its worth. Our Bulletin 421 gives complete properties. Both are yours-for-the-asking from our nearest office.

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ALLIED CHEMICAL & DYE CORPORATION
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Boston Providence Philadelphia Chicago San Francisco
Portland, Ore. Greensboro Charlotte Richmond Atlanta
Los Angeles Columbus, Ga. New Orleans Chattanooga Toronto

Allied Chemical

Annual Processing Review Number

AMERICAN

DYESTUFF REPORTER

VOLUME 44 DECEMBER 5, 1955 NUMBER 25

Alphabetical List of **NEW PRODUCTS** *Developed Since November, 1954*

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WITH the co-operation of manufacturers of dyestuffs, textile chemicals, and wet processing and laboratory equipment, we have prepared the accompanying list of products which, it is understood, have been placed on the market or further developed since November, 1954. The list of products has been subdivided according to the classifications mentioned and the individual products are listed in alphabetical order. The name of the manufacturer, in an abbreviated form, appears directly below the name of the product. In many cases the abbreviated name of the manufacturer will immediately indicate to the reader the full name of the company. However, below we have listed alphabetically the key name of the manufacturer together with the complete firm name and address.

We have tried to make this list as complete and accurate as possible but there may be some unintentional omissions or errors. If so, we shall be pleased to have such matters brought to our attention immediately. We have depended upon the manufacturers to supply us with a complete list of their new products together with information concerning them. The properties claimed for these products are those claimed by the manufacturers. The information which we publish is necessarily in a brief form inasmuch as lack of space prohibits the publication of complete details concerning any product. We hope, however, that the information as it appears is sufficiently comprehensive to give the reader a specific idea of the properties and intended uses of the product.

KEY TO MANUFACTURERS' NAMES

AMALGAMATED—Amalgamated Chemical Corp, Rorer and Ontario Sts, Philadelphia 34, Pa

AMERICAN ANILINE—American Aniline Products, Inc, 50 Union Sq, New York 3, N Y

ANTARA—Antara Chemicals, a sales division of General Aniline & Film Corp, 435 Hudson St, New York 14, N Y

ARKANSAS—Arkansas Co, Inc, P O Box 210, Newark 1, N J

ARNOLD, HOFFMAN—Arnold, Hoffman & Co, Inc, 55 Canal St, Providence 1, R I

AULA—Aula Chemicals, Inc, P O Box 494, 714 Division St, Elizabeth, N J

BELLE—Belle Chemical Co, Inc, Reading, Pa

BERKSHIRE—Berkshire Color & Chemical Co, 250 Delawana Ave, Delawana, N J

BERKSHIRE CORP—Berkshire Color & Chemical Corp, Springfield, Mass

BRADFORD SOAP—Original Bradford Soap Works, Inc, West Warwick, R I

BURKART-SCHIER—Burkart-Schier Chemical Co, Chattanooga, Tenn

CENTRAL SCIENTIFIC—Central Scientific Co, 1700 Irving Park Rd, Chicago 2, Ill

CIBA—Ciba Co, Inc, 627 Greenwich St, New York 14, N Y

COLGATE—Colgate-Palmolive Co, 300 Park Ave, New York 22, N Y

COLLOIDS—Colloids, Inc, 394-8 Frelinghuysen Ave, Newark 5, N J

COOK-P & N—Cook-P & N Machine Co, Inc, 365 Dorchester Ave, Boston 27, Mass

CUSTOM SCIENTIFIC—Custom Scientific Instruments, Inc, 541-543 Devon St, Arlington, N J

CYANAMID—DYESTUFF—American Cyanamid Co, Organic Chemicals Div, Bound Brook, N J

CYANAMID—RESIN—American Cyanamid Co, Textile Resin Dept, 30 Rockefeller Plaza, New Yprk 20, N Y

DEXTER—Dexter Chemical Corp, 819 Edgewater Rd, New York 59, N Y

DREW—E F Drew & Co, Inc, 15 East 26th St, New York 10, N Y

DuPONT—E I du Pont de Nemours & Co, Inc, Wilmington, Del

EASTERN—Eastern Color & Chemical Co, 137-139 Canal St, Providence 3, R I

ECO—Eco Engineering Co, 12 New York Ave, Newark, N J

ECONOMY—Economy Faucet Co, 12 New York Ave, Newark, N J

EMKAY—Emkay Chemical Co, 319-325 Second St, Elizabeth, N J

ENLEY—Enley Products, Inc, 1236 Broadway, Brooklyn 21, N Y

FABLOK—Fablok Mills, Inc, 46 Cordier St, Irvington, N J

FABRIC CHEMICALS—Fabric Chemicals Co, 61-63 Cornelison Ave, Jersey City 4, N J

FANCOURT—W F Fancourt Co, 516 South Delaware Ave, Philadelphia 47, Pa

FEELEY—E C Feeley Co, 650 State St, Charlotte, N C

FOXBORO—The Foxboro Co, Foxboro, Mass

GABB—Gabb Special Products Div of the E Horton & Son Co, Windsor Locks, Conn

GEIGY—Geigy Dyestuffs Div of Geigy Chemical Corp, 89 Barclay St, New York 8, N Y

GENERAL DYESTUFF—General Dyestuff Co, a sales division of General Aniline & Film Corp, 435 Hudson St, New York 14, N Y

GLYCO—Glyco Products Co, Inc, Empire State Bldg, New York 1, N Y

GOODYEAR—The Goodyear Tire & Rubber Co, Inc, Akron 16, O

GREINER—Otto R Greiner Co, 221-223 High St, Newark 2, N J

HARSHAW—The Harshaw Chemical Co, Sales Agents for Zinsser & Company, Inc, Hastings-on-Hudson 6, N Y

HILTON-DAVIS—The Hilton-Davis Chemical Co Division of Sterling Drug Inc, 2235 Langdon Farm Rd, Cincinnati 13, O

HOUGHTON—E F Houghton & Co, 303 West Lehigh Ave, Philadelphia 33, Pa

IMPERIAL—Imperial Paper and Color Corp, Pigment Color Division, Glens Falls, N Y

INSTRON—Instron Engineering Corp, 440 Hancock St, Quincy, Mass

INTERCHEMICAL—Interchemical Corp, Textile Colors Div, Hawthorne, N J

LAUREL—Laurel Soap Manufacturing Co, Inc, Tioga, Thompson and Almond Sts, Philadelphia 34, Pa

MAC—Mac Chemical Co, 5113 Kingston Pike, P O Box 10001, Knoxville, Tenn

MACBETH—Macbeth Corp, P O Box 950, Newburgh, N Y

MAHER—Maher Color & Chemical Co, 355 West Ontario St, Chicago 10, Ill

MAY—Otto B May, Inc, 52 Amsterdam St, Newark 5, N J

MONA—Mona Industries, Inc, Paterson 4, N J

NATIONAL—National Aniline Division, Allied Chemical & Dye Corp, 40 Rector St, New York 6, N Y

NOVA—Nova Chemical Corp, 147-153 Waverly Pl, New York 14, N Y

NYANZA—Nyanza Color & Chemical Co, Inc, 109 Worth St, New York 13, N Y

ONYX—Onyx Oil & Chemical Co, Warren & Morris Sts, Jersey City 2, N J

PAD-DYE—Pad-Dye Corp, 65 Crosby Pl, Paterson, N J

PHARMA—Pharma Chemical Corp, 175 Fifth Ave, New York 10, N Y

PROCTER & GAMBLE—The Procter & Gamble Co, Cincinnati 17, O

PROGRESSIVE—Progressive Color and Chemical Co, 350 Fifth Ave, New York 1, N Y—representatives of Farbwerke Hoechst AG, Frankfurt (M)—Hoechst, West Germany

RAYON PROCESSING—The Rayon Processing Co of R I, 1 Moshassuck St, Pawtucket, R I

ROHM & HAAS—Rohm & Haas Co, Washington Sq, Philadelphia 5, Pa

ROYCE—Royce Chemical Co, Carlton Hill, N J

SANDOZ—Sandoz Chemical Works, Inc, 61-63 Van Dam St, New York 13, N Y

SEYDELL-WOOLLEY—Seydel-Woolley & Co, Box 36, Sta D, Atlanta, Ga

STANDARD CHEMICAL—Standard Chemical Products, Inc, Hoboken, N J

STEIN, HALL—Stein, Hall & Co, Inc, 285 Madison Ave, New York, N Y

TANATEX—The Tanatex Corp, Belleville Turnpike, Kearny, N J

TEXTILE ADJUNCTS—Textile Adjuncts Corp, 876 Pacific St, Brooklyn 38, N Y

ULTRA-VIOLET—Ultra Violet Products, Inc, 5114 Walnut Grove Ave, San Gabriel, Calif

VIKON—Vikon Chemical Co, 1384 Massachusetts Ave, Cambridge 38, Mass

WARWICK—Warwick Chemical Co, a Division of Sun Chemical Corp, Wood River Junction, R I

WESTVACO—Chemical Divisions, Food Machinery and Chemical Corp, 161 East 42nd St, New York 17, N Y

WICA—Wica Chemicals, inc, P O Box 506, Charlotte, N C

WIESNER-RAPP—The Wiesner-Rapp Co, Inc, 1600 Seneca St, Buffalo, 10, N Y

COLORING MATERIALS

AHCOVAT* DIRECT BLACK PD PASTE

(Arnold, Hoffman)

An anthraquinonoid vat dyestuff recommended by AHCO especially for yarns. It is said to have very good to excellent fastness to light and wet treatments. Yarns dyed with this product reportedly may be woven or knitted adjacent to contrast or undyed yarns without resultant staining due to laundering. This dyestuff is said to form an excellent basis for the economical production of navy blues. Ahcovat Direct Black PD Paste is classified as being very good to Weather-Ometer exposure, changing in shade only (redder).

* Trade-mark

ALIZARINE CHROME GREY RL (Patented)

(Progressive)

This new chrome grey is said to offer outstanding wet fastness properties and excellent fastness to light. It reportedly has a perfectly even exhaustion when applied according to the top chrome and monochrome process. It is claimed that only one third of bichromate is necessary to obtain its fastness properties completely. It reportedly develops the same shade and fastness properties on polyamide fibers.

ALIZARINE IRISOL R BASE

(American Aniline)

A new member of the family of oil colors offered by AAP, this color is said to offer to the plastic, petroleum and allied fields a violet of excellent fastness properties. This color reportedly is soluble in various organic solvents, such as toluine, xylene, benzene, etc.

ALIZARINE LIGHT GREY 2BLWN

(Sandoz)

This addition to the Sandoz line represents a special type of the Grey 2BLW, but reportedly showing maximum exhaustion on either wool or nylon in neutral baths.

ALIZARINE LIGHT RED VIOLET 3RL/ XYLENE FAST VIOLET P3R

(Sandoz)

This product is said to be the first red to have all the advantages of the older Rubinole and Violamine types, but with very much greater fastness to light. Said to be extremely bright and showing good resistance to chrome, it is recommended by Sandoz as a superior shading color in chrome dyebaths. Sandoz reports that the product's very level dyeing properties in the pH range of 5-6 and similar rate of exhaustion as other colors in the "P" series has made it a desirable addition to this group. It is suggested that dyers of knitting yarn will now find it possible to produce a wide range of shades with this faster group of dyes.

AMACEL* BLACK JRW

(American Aniline)

This new member of the Amacel family is said to represent an improved type of developed black for acetate. It is described as a clean bright orange powder, which disperses instantly upon contacting water, producing suspensions of excellent stability and resistance to jelling even in high concentrations. Suspensions of this color also are said to be quite stable to high temperature conditions. Perhaps most important is its alleged ability to reserve viscose in cross-dye work. Fastness properties are said to be comparable to the better quality developed black available for acetate.

* Trade-mark

AMACEL* DIRECT BLACK BNJ CONC

(American Aniline)

A new addition to the line of Amacel colors representing a means of producing shades ranging from silver grey to jet black on acetate. Perhaps equally important, it is claimed that this color may also produce comparable shades on Orlon. Fastness properties on both fibers should make it an attractive feature for those people interested in a direct dyeing black for these fibers.

* Trade-mark

AMACRON* ORANGE GLS

(American Aniline)

A new addition to the line of dyestuffs for the dyeing of Dacron polyester fiber, this color is a bright orange of high tinctorial value. It is said to incorporate the outstanding fastness properties required on Dacron. Particular emphasis is placed on fastness to light, crocking, washing and sublimation. In addition, it is claimed that fastness to alkali, acid, perspiration, drycleaning and pressing both wet and dry are rated as excellent under standard testing procedures.

* Trade-mark

AMACRON* YELLOW RLS

(American Aniline)

This new addition to the line of Amacron dyes for the dyeing of Dacron polyester fiber is a bright reddish yellow. It reportedly possesses excellent affinity for Dacron, incorporates standard fastness properties as indicated, has Fade-Ometer light fastness of 100 hours, very good crocking and excellent wash fastness at 160°F. Supplementary tests are said to be equally good for this color. AAP notes that this color is stable in application either with carriers or at temperatures up to 250°F.

* Trade-mark

AMANIL* BROWN CWA

(American Aniline)

A new direct color which reportedly will produce rich chocolate brown shades exhibiting good fastness properties and at the same time reserve acetate. This feature is said to enable one to produce attractive cross-dye effects on blends of viscose and acetate. AAP suggests that, in using this product, a water softener be incorporated in dissolving the color and also in the dyebath to assist in reserving the acetate.

* Trade-mark

AMANIL* NAPTHOL AS-EL

(American Aniline)

This new Amanil Napthol is said to be particularly well suited for production of flag red shades of medium brightness. These shades reportedly are rated as excellent to light, washing, peroxide and crocking. The solubility of this product is said to be excellent, and the solutions quite stable over the periods of time involved in normal application. Amanil Napthol AS-EL is a naphthol of a low substantivity—hence it is claimed to be excellently suited for pad, jig coupling, pad-continuous and warp dyeing operations.

* Trade-mark

AMANTRENE* SUPRA DARK BROWN BVA PASTE

(American Aniline)

A new vat color of the anthraquinone type, which reportedly makes possible the production of economical mauve shades of brown, olive and grey. AAP states that the excellent dispersion properties of this paste make it excellently suited for package and beam dyeing work as well as for conventional jig and continuous application. It is also stated that the excellent fastness properties possessed by this product make it a desirable addition as a work-horse color to any line of vat-color work.

* Trade-mark

AMANTHRENE* YELLOW PG DOUBLE POWDER

(American Aniline)

A new addition to AAP's line of vat-color powders. This powder supplements the versatility of the double paste in making available this form for those customers who prefer to work with powders. AAP reports that results of dispersion and filtration tests are excellent, indicating that this color is well suited for all vat-color applications including package and beam-dyeing work. Its fastness properties are equivalent to that of the paste, and AAP suggests that it is an excellent all-around color for the production of quality work.

* Trade-mark

AMAPLAST* YELLOW EJ

(American Aniline)

This color is rather unique as it is fluorescent in certain plastics and hence should be of definite interest to persons desiring such a novel effect.

* Trade-mark

AMAPLAST* YELLOW FC

(American Aniline)

This color is a reddish yellow which reportedly incorporates excellent fastness properties with workability for application in the plastic field.

* Trade-mark

AMAPLAST* YELLOW L

(American Aniline)

This color is the greenest of all of the Amaplast yellows as well as being the brightest. It is a color which reportedly offers excellent clarity coupled with excellent resistance to heat and light.

* Trade-mark

ARIDYE® BROWN FWY

(Interchemical)

A new resin-bonded pigment color for printing neutral browns and tans on cotton, rayon, acetate, nylon, Dacron, and other natural and synthetic fibers and blends. Aridye Brown FWY reportedly provides excellent fastness to washing, passing a No. 4 wash in accordance with AATCC Standard Test Method 36-54. It is said to be fast to drycleaning either with carbon tetrachloride or perchlorethylene, and to provide good fastness to light. Aridye Brown FWY has excellent running properties, it is claimed.

ARIDYE® ORANGE FL

(Interchemical)

A new resin-bonded pigment color for printing cotton, rayon, acetate, nylon, Dacron, and other natural and synthetic fibers and blends. It is said to be useful as a self-shade for producing reddish orange shades and in blends for shading and toning. Aridye Orange FL reportedly provides excellent fastness to light, and excellent fastness to washing, passing a No. 4 wash in accordance with AATCC Standard Test Method 36-54. It is said to be fast to drycleaning either with carbon tetrachloride or perchlorethylene. It is stated that Aridye Orange FL is also an excellent color for printing cotton to be plissed; it does not cut out with caustic soda.

ARIDYE® ORANGE FR

(Interchemical)

A new resin-bonded pigment color for printing cotton, rayon, acetate, nylon, Dacron, and other natural and synthetic fibers and blends. It is said to be useful as a self-shade for producing bright orange shades, and for blending with Aridye reds for producing attractive scarlet shades possessing a high degree of fastness, particularly to washing and drycleaning. It reportedly passes a No. 4 wash in accordance with AATCC Standard Test Method 36-54, and is fast to drycleaning either with carbon tetrachloride or perchlorethylene. Aridye Orange FR also is said to be an excellent color for printing cotton to be plissed; it does not cut out with caustic soda. It is reported to be excellent for discharge printing since it is not affected by hydrosulfite or sodium sulfoxylateformaldehyde.

ARIDYE® RED FD2R

(Interchemical)

A new resin-bonded pigment color for printing cotton, rayon, acetate, nylon, Dacron, and other natural and synthetic fibers and blends, Aridye Red FD2R is said to be useful either as a self-shade for producing bright red shades of good depth or in blends requiring a low-cost red component with good tinctorial value. It reportedly provides excellent fastness to washing, passing a No. 4 wash in accordance with AATCC Standard Test Method 36-54, and good fastness to light. Aridye Red FD2R has excellent running properties, it is claimed.

ARIDYE® RED PV

(Interchemical)

This new resin-bonded pigment color is offered especially for printing fabrics to be vinyl coated, as it reportedly will not bleed into the vinyl coating. It is said to be useful for producing bright pinks and reds, is fast to drycleaning either with carbon tetrachloride or perchlorethylene, and provides good fastness to light. Aridye Red PV has excellent running properties, is is claimed.

ARIDYE® SCARLET FS2Y

(Interchemical)

A new resin-bonded pigment color for printing cotton, rayon, acetate, nylon, Dacron, and other natural and synthetic fibers and blends. It is said to be useful as a self-shade for producing bright yellowish scarlet shades, and as a shading color in blends requiring a high degree of fastness to washing. It reportedly passes a No. 4 wash in accordance with AATCC Standard Test Method 36-54. Aridye Scarlet FS2Y is said to be an excellent color for printing cotton to be plissé; it does not cut out with caustic soda. This color has excellent running properties, it is claimed.

ARTISIL DIAZO BLACK SGVW

(Sandoz)

Sandoz reports that this new brand is similar in dyeing and fastness properties to their former "SG" type, but with the advantage of leaving viscose effects white. It is stated that, in many cases, the need for clearing with permanganate can be dispensed with.

ARTISIL DIRECT BLUE BSR

(Sandoz)

Similar in properties to the "BSQ" brand but slightly redder in shade. Particularly recommended by Sandoz for deep blues and navy shades because of its excellent tinctorial value and build-up qualities. Fastness properties are said to be generally good and adequate for the dress goods trade.

ARTISIL DIRECT RED R CONC

(Sandoz)

A new addition to the Artisil series of dyes, this product is recommended by Sandoz for production of deep reds, maroons and wine shades on acetate and nylon with good economy. Good dyeing properties with adequate fastness to meet commercial requirements is reported for the product.

ARTISIL ORANGE GFL ULTRADISPERSED

(Sandoz)

Under the above designation Sandoz is marketing a new member of this new series of acetate dyes. All types bearing the mark *Ultradispersed* are reported to be dispersible in plain water. This feature is reported to make them practically free of spotting or specking troubles so common in pastel shades.

Other outstanding features reported are its very high fastness to light, washing, perspiration, crocking, gas fading, drycleaning and sublimation on acetate, Dacron and nylon. It is also claimed to have good dyeing and fastness properties on Acrilan and to be a good shading color on Arnel. The product reportedly gives an excellent discharge on acetate and nylon.

Other colors in this new dispersed form are:

ARTISIL ORANGE RFL ULTRADISPERSED
ARTISIL BLUE GFL ULTRADISPERSED Pat
ARTISIL YELLOW RGFL ULTRADISPERSED

AULABRITE® SERIES 3XXS PIGMENT COLORS

(Aula)

A new line of water-dispersed pigment colors with increased pigment content developed primarily for pad dyeing. The product numbers start with the digit "3", the next two digits indicate the shade, and the last digit is always the number "3". This new line is said to be priced to offer substantially more color value than is produced by the regular lines of color concentrates designed for pigment printing.

BASF ACETATE FAST PINK RF

(BASF-Hoya)

This disperse dyestuff is used for dyeing and printing acetate as well as nylon. It is said to have good all-around fastness properties. The reported light rating in medium and heavy shades is 7.

BASOLAN BLUE BGA
BASOLAN FAST DARK BLUE R
BASOLAN CHROME ORANGE RM

(BASF-Hoya)

These are additions to the Basolan dyestuff group, representing acid colors.

Basolan Blue BGA is said to be suitable for dyeing and printing with good all-around fastness properties.

Basolan Fast Dark Blue R reportedly has good solubility and good all-around fastness properties.

Basolan Chrome Orange RM is described as a product with excellent leveling properties, good solubility, and good all-around fastness. The fastness rating to light is 7. It can be used in both bottom and top chrome dyeings.

BELAMINE FAST BLUE BLUC

(Belle)

A new direct dyestuff for cotton and rayon reportedly of outstanding all-around fastness and excellent money value. It is especially recommended by Belle for the production of full shades or bright navies of excellent light and wash fastness when aftertreated with urea-formaldehyde resin or urea-formaldehyde and copper complex. Shade change on aftertreatment is said to be very slight and acetate and nylon are unstained.

BELLEFAST COLORS

(Belle)

A new line of direct dyestuffs for cotton and rayon. These are reported to have been developed especially for the production of full shades that are of very good fastness to light and of exceptional fastness to washing when aftertreated with Belletix CN or Belletix VS, either alone or in conjunction with urea-formaldehyde resin, or with urea-formaldehyde resin alone or in conjunction with copper complex. With resin aftertreatment the wash fastness of many of the colors is said to approach that of the vat dyes; in all cases, it is claimed, shade change is slight, and excellent fastness to perspiration, rubbing and hot pressing are obtained. All colors leave acetate white, and with few exceptions nylon is also left unstained, it is stated. Before resin treatment, most of the colors reportedly discharge well in light to medium shades with either neutral or alkaline discharge pastes. In addition they are said to be easily soluble and level-dyeing and reportedly will produce excellent unions on cotton-viscose mixtures. All the powders are said to be nondusting. The following shades are available:

BELLEFAST BLACK LLJ
BELLEFAST BLUE LBR
BELLEFAST BLUE L2B
BELLEFAST BLUE LLG
BELLEFAST BLUE L4G
BELLEFAST BLUE L6G
BELLEFAST BLUE LRL
BELLEFAST BROWN LBT
BELLEFAST BROWN LLC
BELLEFAST GREEN LFB
BELLEFAST GREEN LW5B
BELLEFAST GREY LWBG
BELLEFAST GREY LWR
BELLEFAST NAVY LM
BELLEFAST NAVY LW2B
BELLEFAST ORANGE LWF
BELLEFAST RED LRF
BELLEFAST RUBINE LBL
BELLEFAST VIOLET LBD
BELLEFAST YELLOW LLR

BERKSHIRE DIRECT FAST BLUE 2BWF

(Berkshire)

The first of a new series of WF (washfast) direct colors, this is described as a level-dyeing deep navy-type blue of outstanding wash fastness. It is reported suitable for U-F resin and copper-complex aftertreatments. It reserves acetate-nylon and other protein fibers.

BERKSHIRE DIRECT FAST NAVY M
BERKSHIRE DIRECT FAST NAVY RM

(Berkshire)

It is reported that these two new colors produce deep navy shades of moderate light fastness, are suitable for resin copper-complex aftertreatments, and are of great economy in production of dark navy shades on rayon.

BRILLIANT ALIZARINE MILLING BLUE RWL paf

(Sandoz)

Sandoz calls this the outstanding blue in this series, stating that it combines the excellent fastness to light of the "BL" brand with the extreme fastness to fulling of the "G" type. The shade is approximately in-between the "BL" and "2RL" brands. It is further stated that its excellent fastness to all mill and consumer requirements recommends its use for top and raw-stock work for highest grade material, and its excellent fastness to chlorination recommends its use for bright blues on washable woolens.

Piece goods reportedly can be dyed level with this milling color by dyeing with diammonium phosphate and ammonia.

Another reported feature is its excellent fastness to cross dyeing, equalled in the past only by a fugitive chrome blue.

CALCOFLUOR WHITE RWS

(Cyanamid-Dyestuff)

A water-soluble brightener (or optical bleach), which is said to exhibit level-dyeing characteristics and affinity for wool, nylon, acetate, Acrilan, Dynel, Orlon, silk, and Vicara. It has been designed for ease of dissolving and handling for those dyers who prefer not to use the sulfuric acid or alcohol solvents which are required to dissolve Calcofluor White RW and Calcofluor White RW Single.

When applied to the above fibers, Calcofluor White RWS reportedly produces a bright blue fluoresence under ultraviolet light. In daylight the effect is a noticeably whiter and brighter fiber.

The use of Calcofluor White RWS is not restricted to white goods. It reportedly ameliorates the appearance of prints by whitening the background. Also, it is said to brighten pastel shades.

Calcofluor White RWS can be applied to rawstock, yarn or piece goods in a supplementary application or in conjunction with other operations, such as bleaching, scouring, stripping, etc. Further information is given in Technical Sales Bulletin No. 814.

CALCOSOL YELLOW PG DOUBLE PASTE

(Cyanamid-Dyestuff)

This product is said to produce rich golden yellows on cotton and viscose, and to be characterized by good money value and excellent working properties. This dye reportedly levels well, oxidizes easily and changes shade only slightly on soaping. Calcosol Yellow PG Double Paste is said to be fast to continuous or batch scouring and bleaching processes. It is not sensitive to heat and moisture nor is it phototropic.

It is used on raw stock, skeins, packages, cheeses and beams. In piece goods dyeing it is

dyed either by batch or continuous methods.

Fastness properties and dyeings are shown in Technical Sales Bulletin No. 818.

CHLORANTINE FAST BRILLIANT BLUE 2GLL

(Ciba)

This product is said to yield very bright shades of excellent fastness to light and moderate fastness to wet treatments on cotton and regenerated cellulose rayon. It reportedly is readily soluble and thus suitable for application in circulation machines. Chlorantine Fast Brilliant Blue 2GLL levels very well, covers viscose rayon of varying affinity, and is not sensitive to metals, it is claimed. Synthetic resin finishes reportedly improve the fastness to washing and only very slightly impair the fastness to light.

CHLORANTINE FAST BROWN CFL

(Ciba)

This product is said to be a good dyeing, very fast-to-light direct color which has an extremely low copper and manganese content.

CHLORANTINE FAST ORANGE FRLL

(Ciba)

This dyestuff is said to possess exceptional light and wash fastness properties before and after treatment with urea-formaldehyde resin.

CIBALAN BLACK BGL

(Ciba)

Said to be the first straight black in its generic class, this product reportedly offers excellent fastness and level-dyeing properties for wool, nylon, and silk. Attractive shades from jet to light gray are available, and charcoal gray is easily dyed as a self shade, it is reported.

It is claimed that good tinctorial value is offered at all practical dyeing levels. Versatility ranges from pressure dyeing of filament nylon to vigoureux printing. Good union dyeings on wool and nylon reportedly are obtained with normal dyeing procedures. It is said to have light fastness of 120 Fade-Ometer hours and ratings of "very good in laundering, fulling and milling." Component with other Cibalans to create other fashion shades of all-Cibalan excellence.

CIBALAN BRILLIANT BLUE GL
CIBALAN BRILLIANT YELLOW 3GL

(Ciba)

These products, singly and in all combinations to make greens, are said to possess outstanding brightness for this class of dyestuff and have good tinctorial value at all practical dyeing levels. They represent neutral dyeing colors which can be used on wool, nylon and silk. Both wet out readily at room temperature and possess good solubility, it is reported.

CIBALAN YELLOW FGL

(Ciba)

A pure yellow shade which is said to have extraordinary fastness to light, this is the twenty-fifth member of the neutral-dyeing premetallized Cibalan dyes.

CIBANONE VIOLET BNA DOUBLE PASTE

(Ciba)

This new violet is said to have better all-around fastness to wet processing operations than any of the others in the vat line. It also is said to compare favorably with these violets in light fastness, having a rating of seven in the darker shades.

CIBANONE YELLOW P2GA DOUBLE PASTE

(Ciba)

This new anthraquinone-type vat dye is said to have outstanding light fastness and exceptionally good working properties in all types of application.

CUPROFIX NAVY CLW pat

(Sandoz)

The following features of this product have been enumerated by Sandoz:

1) Produces deep, rich navy shades on cotton or viscose.
2) Aftertreatment to produce its maximum fastness can be done with either Cuprofix or copper sulfate/acetic acid.
3) Excellent wash fastness, passing a No. 3 test when dyed on cotton or viscose.
4) Excellent light fastness (L-7 to L-8) when aftertreated with Cuprofix or copper sulfate.
5) Shade and light fastness unaffected by combined urea-formaldehyde/Cuprofix treatment.

CUPROPHENYL* GREEN BL (Patented)

(Geigy)

The latest addition to the series of substantive azo colors for rayons and cottons introduced a few years ago under the Cuprophenyl designation. These dyestuffs, when applied as ordinary direct colors and given a simple aftertreatment with copper sulfate and acetic acid, reportedly produce shades with an exceptionally high degree of washing and light fastness, and in some instances, even approach vat colors in these respects. The entire range of Cuprophenyls is said to be well adapted for subsequent finishing with urea-formaldehyde resins.

* Registered trade-mark

DEORLENE BRILLIANT RED 3B
DEORLENE BLUE 5G

(Ciba)

These new colors are said to have excellent fastness to perspiration, crocking, carbonizing and hot pressing in addition to good wash and light fastnesss.

DIAMINE FAST BLACK AM

(General Dyestuff)

A direct black for cellulosic fibers, which is especially recommended by GDC for dyeing unions on cotton (particularly mercerized cotton) and rayon where it is desired that the shade on both fibers be as bloomy, jet, and solid as possible, such as for two-fiber hosiery. It is also recommended by GDC for the mohair-pile cotton-back channel guides of automobile windows, for which it is desirable that no yellowish stain be imparted to the acetate center of the safety glass during long use. Toy plush with mohair or rayon pile is said likewise to be well dyed with this color.

DIAZAMINE RED BROWN R

(Sandoz)

This product yields a bright copper red brown shade and is recommended by Sandoz as an excellent base for all shades of browns for plain and dischargeable fabrics.

When used with Diazamine Blue BR or Blue 2RW and Diazamine Orange RS and developed with beta naphthol, a wide range of shades possessing satisfactory fastness properties is possible, it is claimed.

DIAZAMINE SCARLET RPS CONC

(Sandoz)

A new bright developed scarlet. Sandoz reports its outstanding features to be:

1) Good brilliancy of color yield at low cost.
2) Excellent dischargeability.
3) Excellent fastness to perspiration and salt water.
4) Adequate wash fastness for dischargeable fabrics.

Where maximum wash fastness plus improved light fastness is desired, Sandoz recommends Diazamine Fast Scarlet RWL.

DIAZO DISCHARGE BROWN M NEW

(General Dyestuff)

A diazotizable direct dyestuff recommended by GDC for development with beta naphthol, which is claimed to give excellent discharges in full reddish-brown shades on cellulosic textiles. It is also claimed to hold its shade and light fastness upon resin aftertreatment. Full shades on rayon are said to have fairly-good-to-good (4-5) light fastness, very good (III 4) fastness to washing at 160°F, and excellent (5) fastness to rubbing, perspiration, and hot pressing.

DIAZOPHENYL* ORANGE 2RG CONC 200%

(Geigy)

A product with the shade and wet-fastness properties of Diazophenyl Orange R Supra (Pr 173), but possessing noticeably better light fastness. The new product cannot be recommended for acetate reserve nor will it discharge as well as the older type except by the neutral method.

* Registered trade-mark

DIAZOPHENYL* SCARLET RPN SUPRA

(Geigy)

An exceptionally bright developed scarlet reported to have good discharge and acetate reserve. This new product is said to distinguish itself from other dischargeable scarlets of similar cost by its better exhaust and ability to build up in heavy depths especially on cotton.

* Registered trade-mark

DIPHENYL FAST ORANGE LF

(Geigy)

An exceptional ability to reserve nylon while producing fast to light shades on cottons and rayons is said to be the outstanding feature of this new dyestuff. The light fastness is said to be improved by subsequent treatment with popular anti-crease finishes.

Du PONT NAPHTHANIL* DB

(Du Pont)

This azoic dye is an economical prepare for producing brown shades on cotton and rayon that reportedly will possess good general fastness properties when coupled with Du Pont Naphthanil Diazo Garnet GBC, Du Pont Naphthanil Diazo Scarlet GG or Du Pont Naphthanil Diazo Red B. A satisfactory white discharge cannot be obtained from shades produced with these combinations.

Du Pont Naphthanil DB reportedly can be applied in closed machines as well as in open jigs and padders to cotton and rayon in the form of rawstock, yarn or piece goods. Since the product is resistant to air oxidation under normal conditions and requires no formaldehyde for stabilization it is particularly suitable for use in open machines, it is claimed.

It reportedly has high substantivity for cotton, which can be increased with common salt, although the salt tends to decrease the stability of the solution. Material impregnated with the prepare should be protected from acid fumes and coupling should be accomplished as soon as possible. Du Pont Naphthanil DB couples more slowly than other Naphthanil products and development is best accomplished in a neutral bath allowing sufficient time for complete coupling. Finishing by soaping at the boil is said to promote optimum fastness properties. Du Pont Naphthanil DB is said to have good solubility and it can be dissolved by either the hot or cold method.

* Trade-mark registered

DuPONT NAPHTHANIL* LB

(DuPont)

This azoic dye is described as a prepare for use in the production of bright shades of brown on cotton and rayon with good fastness properties when coupled with various Du Pont Naphthanil diazo salts or bases. It reportedly couples over a wider pH range, yields brighter and redder shades of brown and has better chlorine fastness than Du Pont Naphthanil DB.

It is especially recommended by Du Pont for coupling with Du Pont Naphthanil Scarlet GG, Du Pont Naphthanil Diazo Red B and Du Pont Naphthanil Scarlet G Base. Shades made with this prepare are not dischargeable to a satisfactory white.

Du Pont Naphthanil LB is said to have high substantivity for cotton and reportedly can be applied in open jigs and padders and in closed

machines to rawstock, yarn and piece goods. Because of a high degree of light fastness, this product can be used to advantage on drapery and upholstery materials, it is claimed. Finishing by soaping at the boil reportedly promotes best fastness properties and development of true shade. It is said to have good solubility and stability and can be dissolved by either the hot or cold method.

* Registered trade-mark

Du PONT NAPHTHANIL* LG

(Du Pont)

This azoic dye produces bright yellow shades on cotton and rayon reportedly with good fastness to light, washing and peroxide bleaching when coupled with Du Pont Naphthanil Diazo Scarlet GG. It is also of interest as a shading component with other prepares, such as Du Pont Naphthanil DB or LB, for producing a number of brown shades with various Du Pont Naphthanil diazo salts or bases. Shades produced with the prepare are not recommended where a white discharge is desired.

Du Pont Naphthanil LG reportedly has good substantivity for cotton, which can be increased by the addition of common salt. The prepare can be applied to cotton or rayon rawstock, yarn or piece goods by padding, in open jigs or in closed circulating equipment. It is said to have good all-round fastness and to be suitable for use on materials that are subjected to light exposure and washing, such as draperies, upholstery and dress goods.

To insure level results in coupling Du Pont Naphthanil LG when used alone, it is reported essential to add ¼ gallon of acetic acid (30%) per 100 gallons of liquor buffered with 8 pounds of sodium acetate. The true yellow shade is obtained by treating in a boiling bath containing soap, 6¾ ounces of Du Pont Hydrosulfite Conc and 3 ounces of dry caustic soda per 100 gallons. Du Pont Naphthanil LG is said to be readily dissolved by either the hot or cold method and to exhibit good stability in concentrations used for practical work.

* Registered trade-mark

Du PONT WOODSTAIN ORANGE N

(Du Pont)

This nongrain-raising woodstain is said to possess outstanding solubility in solvents normally used by the industry, such as alcohol, cellosolve, Carbitol, etc. While the product can be dissolved more readily with heat, it can be satisfactorily stirred into cold solvents, it is claimed.

With its solubility, good light fastness and reddish-orange shade it is of particular interest for use with other woodstains in formulating various mahogany, walnut and other popular furniture shades, it is reported.

DUROFAST RED RL
DUROFAST RUBINE BLN

(Berkshire)

These two new reds are said to have outstanding fastness to light. When aftertreated with resin and suitable copper-complex resin, it is claimed that wash fastness up to 180°F is obtained. They are said to be superior to previous colors of this type in that the deficiency of being slow exhausting from the dye liquor, thereby resulting in loss of tinctorial power, has been overcome.

Durofast Red RL is yellower in shade than Durofast Rubine BLN but similar in fastness and working properties.

DUROFAST RED WF

(Berkshire)

A new red of the WF (washfast) series that reportedly shows good light fastness and excellent wash fastness properties. It is rapid dyeing and requires careful application to piece goods. It is best utilized for raw stock dyeing.

DUROFAST SCARLET LF

(Berkshire)

This new bright scarlet is said to have good fastness to light. It is suitable for resin and selected dye-fixative aftertreatments. Acetate-nylon effects are reserved.

DUROFAST YELLOW RLFC
DUROFAST ORANGE GLFC

(Berkshire)

These two new direct colors are part of Berkshire's WF (washfast) series. They are said to be outstanding in their fastness to washing and light, and somewhat resistant to chlorine. They are suitable for U-F resin and dye-fixative compiling. Acetate-nylon and protein fibers are reserved.

ERIO* ANTHRACENE BRILLIANT BLUE 2GC

(Geigy)

It is reported that this new dyestuff is particularly well adapted for ladies wear, carpet and knitting yarns where the end use calls for brightness and levelness coupled with good light fastness.

It is said also to be well suited for producing good unions on wool-Orlon blends as the shade and fastness on both fibers is quite similar.

* Registered trade-mark

ERIO* ANTHRACENE GREY 2BLN

(Geigy)

An acetic acid color which also is said to dye well from a neutral bath, this new dyestuff produces greenish-grey shades on wool and on nylon. Geigy cites the following characteristics:

1) Exceptional light fastness and all-around good wet fastness. Under artificial light the shade goes greener and in combination will balance colors which go red.
2) Ability to produce good unions on wool-nylon blends especially when used with Erional NW.
3) Well adapted from a working property and fastness standpoint for use in combination with Polar and milling colors.
4) On filament-nylon piece goods it covers barré effects better than most acid colors.
5) When used as a chrome color it shows very little shade change and still maintains its high-quality fastness.

Registered trade-mark

ERIO CHROMAL* NAVY BLUE BRL

(Geigy)

This product is described as an extremely fast to light, bright shade of navy which can be applied to wool by either the top chrome or metachrome process. It is stated that this very level dyeing color is well suited for use on loose wool, slubbing, piece goods and yarns in either medium or heavy shades.

* Registered trade-mark

ERIO* FAST YELLOW 3GAL

(Geigy)

Recommended by Geigy for carpet, bathing suit and sweater yarns, this moderately bright shade of yellow reportedly may be applied from a sulfuric acid or acetic acid bath. It is said to have excellent fastness to light and good fastness to water, sea water and perspiration.

* Registered trade-mark

FAST RED SALT FRN (Patented)

(Progressive)

This is a new standardization of Fast Red Salt FR. The FRN brand possesses better stability during storage and in the dyebath. It is reported that FRN is free of heavy metals which prevent damage during peroxide bleaching and vulcanizing. Fast Red Salt FR can be substituted 1 to 1 in formulations with Fast Red Salt FRN.

FAST RED SALT KL (Patented)

(Progressive)

It is claimed that this product produces brighter pink and red shades than can be obtained with any other fast color salt. The fastness to light and washing is said to be outstanding when it is used in combination with Naphtol AS-LC and Naphtol AS-ITR.

FASTUSOL* GREY LGL

(General Dyestuff)

A new, straight, fast-to-light direct dyestuff, which is said to be characterized especially by dyeing level more easily under difficult conditions than Fastusol Grey LVGLA. The latter dyestuff, however, is still claimed to remain the fastest direct grey to light, particularly upon resin aftertreatment. The new Fastusol Grey LGL is said to exhibit very good (6) fastness to light on cotton in medium shades and excellent (7) fastness on rayon. It is recommended by GDC for resin aftertreatment, in which it changes shade only slightly and loses only a half a point or so in light fastness while gaining distinctly in wet fastness. GDC suggests the use of Fastusol Grey LGL as an excellently (5) dischargeable ground color. Further advantages attributed to this dyestuff are that dyeings appear slightly greener (not redder) and brighter in artificial light, and it leaves nylon, acetate, and wool effect threads clean or nearly clean.

Registered trade-mark

FASTUSOL* YELLOW LEFC

(General Dyestuff)

A direct dyestuff giving reddish-yellow shades, which is claimed to be unsurpassed in light fastness by any known type of direct yellow. In full shades it is said to exhibit excellent (7) fastness to light on cotton and excellent-to-maximum (7-8) fastness on rayon, to be virtually unaffected by urea-formaldehye anticrease finishing, and to be only slightly affected by melamine-formaldehyde resins. Resin finishing reportedly increases the fastness to washing on rayon from II 5 to III 4-5. This yellow is reported to exhaust slowly in the presence of salt and to relevel well (4) while drawing onto the fiber, leaving acetate, nylon, polyester, and acrylic fibers clean (5). It is not dischargeable.

Registered trade-mark

HELIOGEN* BLUE BG POWDER

(General Dyestuff)

A straight, greenish-blue, noncrystallizing, copper phthalocyanine pigment toner in the form of an especially soft-grinding powder for use in the manufacture of enamels, lacquers, paints, and printing inks, and for coloring plastic, rubber, and other elastomers. It is greener in tone than other Heliogen blues and reportedly yields brighter shades than other blues when shaded to the green side.

* Registered trade-mark

HELIOGEN* GREEN G SUPRA PASTE

(General Dyestuff)

A straight chlorinated copper phthalocyanine pigment of exceptionally small particle size dispersed in an aqueous paste originally developed for use in coloring spun-dyed viscose yarns. It is recommended by GDC for other uses where a highly dispersed green of bright shade, very good tinctorial value, exceptional chemical stability, and superior light fastness is required.

Registered trade-mark

HELIOGEN* GREEN GB PRESSCAKE SPECIAL

(General Dyestuff)

A straight copper polychlorophthalocyanine pigment which is said to be entirely free from surfactants. It is recommended by GDC for the preparation of pigment products only by flushing methods. It is said to give very bright

* Registered trade-mark

bluish greens of excellent light fastness and chemical stability, including excellent resistance to crystallizing in aromatic solvents. GDC recommends it for inks, paints, rubber-base paints, textile printing, lacquers, and molding plastics.

HELIOGEN* GREEN GP PRESSCAKE SPECIAL

(General Dyestuff)

A straight copper polychlorophthalocyanine pigment which is said to be entirely free from surfactants and of exceptionally fine particle size. GDC recommends it for the preparation, only by flushing methods, of pigment products that will have a desirable viscosity as well as high tinctorial value without grinding for such uses as textile-printing concentrates. This pigment is claimed to give very bright greens of excellent light fastness and great chemical stability.

* Registered trade-mark

HELIOGEN* GREEN GWS-ND POWDER SPECIAL

(General Dyestuff)

A copper phthalocyanine pigment in the form of a water-dispersible powder standardized without an electrolyte and containing both an anion-active dispersing agent and a nondusting agent. It is therefore claimed to disperse readily without dusting when poured into water to give a uniform dispersion free from specks after only a minimum of stirring. It is recommended by GDC for uses where high tinctorial power is required without further processing for coloring such things as paper in a beater, resin-emulsion paints, and any water-containing products in which an electrolyte is objectionable and for which the best fastness to light is demanded.

* Registered trade-mark

HELIZARIN BRILLIANT VIOLET R
HELIZARIN SCARLET B
HELIZARIN BLUE R

(BASF-Nova)

These three types represent additions to the pigment dyestuff range. They are water-resin dispersions reportedly of excellent tinctorial strength and, when used in conjunction with Helizarin Binders, they are said to exhibit excellent fastness properties. The fastness to light rating of all three products is said to be 7-8, even in light shades. As with the other types in the Helizarin range, these three colors are suitable for padding as well as printing.

HILTONE* BROWN RLC
HILTONE* ORANGE 2R
HILTONE* YELLOW 4G
HILTONE* RED DCF
HILTONE* RED DCY
HILTONE* RED DCR

(Hilton-Davis)

New additions to the Hiltone line of resin-bonded pigment colors for fast-color printing on cotton, rayon, acetate, nylon and other synthetics. These new products supplement the Hiltone color line of resin-bonded pigment colors.

* Trade-mark

HILTONE* RED DCX

(Hilton-Davis)

A new resin-bonded pigment color for producing bright reds and pinks on cotton, rayon, acetate, nylon and other synthetics, reportedly with exceptional fastness properties. This color was developed primarily as a bright red which would withstand perchlorethylene drycleaning. The light and wash fastness of Red DCX is said to make it suitable for drapery work. It is also reported suitable for cotton plissé.

* Trade-mark

HILTONE* RED G

(Hilton-Davis)

This new resin-bonded pigment color for printing of cotton, rayon, acetate, nylon and other synthetics was developed primarily for its fastness to perchlorethylene drycleaning. Hiltone Red G is reported suitable for printing fabrics which are to be vinyl-coated. Its wash and light fastness reportedly make it suitable where fast-color printing is desired.

HILTONE* SCARLET 2G

(Hilton-Davis)

A new resin-bonded pigment color for fast color printing of cotton, rayon, acetate, nylon and other synthetics. It is reported that the unusual brightness of Hiltone Scarlet 2G makes it of particular interest as a self shade especially in long cuts which produce bright pinks. The fastness properties of Scarlet 2G are said to be excellent to light, wash, and perchloretnylene drycleaning. It is also reported suitable for cotton plissé.

Trade-mark

T-236 IMPad* BLUE G
T-237 IMPad* CARBON BLACK
T-238 IMPad* IRON OXIDE YELLOW
T-240 IMPad* VIOLET B
T-241 IMPad* FAST YELLOW G
T-242 IMPad* VIOLET R
T-243 IMPad* FAST ORANGE
T-244 IMPad* BROWN
T-245 IMPad* FAST BROWN

(Imperial)

These products are highly dispersed pigment concentrates, especially stabilized for use with aqueous binders for the pad dyeing of textile fabrics. The products are designed for use with Imperial's T-106 resin (melamine type), and with such reportedly will produce very level, bright, light fast, economical dyeings, characterized by excellent crock resistance and wash fastness and freedom from migration. The products are reported to be suitable for use on cotton, nylon, Orlon, Dacron, or glass. They have the advantage of flexibility in that they can be used with regular urea-formaldehyde finishes replacing the T-106 binder. They are completely aqueous in nature with no oil phase, and are said to be stable to mechanical agitation with no danger of flushing.

Trade-mark

IMPERON PIGMENT PRINTING AND DYEING COLORS

(Progressive)

Oil-in-water emulsions of the following brands:

IMPERON YELLOW 5G
IMPERON YELLOW G
IMPERON YELLOW R
IMPERON ORANGE GR
IMPERON RED G
IMPERON RED GR
IMPERON RED R
IMPERON VIOLET B
IMPERON BLUE B
IMPERON GREEN G
IMPERON BROWN R
IMPERON BLACK G

These fine dispersions, which reportedly have excellent stability, are fixed on the fiber by Imperon-Binder FA and Imperon P, the fixing agent.

The emulsion of the Imperons is said to have a good consistency. It is reported that the viscosity does not change on standing, screens do not clog up and leaders do not get stiff. One of the main features is said to be the softness of the printed or padded material. Wet-in-wet printing is possible. The fastness to most solvents is said to be very good. The film is no longer thermoplastic, which reportedly makes the Imperons suitable for the Everglaze article. It is pointed out that Imperons are fixed by neutral and acid steam and can therefore be used universally with all other colors, and, since no acid is used or developed during the process, tendering of material is eliminated. Since Imperons are alkaline, it is claimed that reserve printings with best fastness properties can be obtained under aniline black and Naphtol AS combinations. Imperons do not deteriorate during exposure to light, it is reported; and therefore, the fastness to washing is not impaired.

T-214 IMPrint* FAST YELLOW
T-215 IMPrint* FAST RED
T-216 IMPrint* BLUE G
T-217 IMPrint* VIOLET R
T-218 IMPrint* VIOLET B

(Imperial)

These are bright color aqueous printing concentrates, which are said to possess exceptionally good light fastness.

T-217 IMPrint Violet produces a very desirable shade of fuchsia, and reportedly has proved valuable both as a straight and as a toning color.

IMPrint aqueous pigment printing concentrates are a combination of finely dispersed pigment and a binder system based on a water soluble cationic resin[**]. Reported advantages include absence of pick-off on hot calendering, ease of cleaning from equipment, freedom from inflammable solvents, excellent prints with aniline black, Rapidogens, etc, better color value and wash resistance on naphtholated cloth (salt colors) and generally improved crock resistance, particularly in deeper shades. They are said to be particularly adapted to plissé work since the printed areas do not cause a caustic resist. The IMPrints can be used alone or in combination with regular emulsion types. No special equipment is necessary, since these products are designed to function under the processing conditions generally prevailing in the textile industry.

Trade-mark
U. S. Pat. 2,616,861

INDANTHRENE* DIRECT BLACK CGF INFRA PASTE

(General Dyestuff)

An anthraquinone vat dyestuff primarily recommended by GDC for dyeing deep jet blacks at 30% on cotton in circulating machines; equal blacks are said to be attainable at lower percentages on mercerized cotton rayon, and linen. Full shades are claimed to display maximum (8) light fastness, very-good-to-excellent (IV 4-5) fastness to severe washing, excellent (5) fastness to mercerizing and plissé finishing and very-good-to-excellent (4-5) fastness to peroxide bleaching and 0.3%-active chlorine solution. This dye is offered in the form of a water paste free from specks in the special vat-pigment corduroy speck test and is therefore said to be very suitable for pigment padding as well as for pigment circulation in machines.

Trade-mark registered

INTERCHEMIC BLUE NBNJ

(Interchemical)

A disperse dye, which is said to be especially useful for producing bright blue shades on acetate. When used on nylon, it produces slightly duller shades. This dye is useful also as the blue component for producing navies, dark greens, and browns and other compound shades. The color yield is said to be particularly good at temperatures from 160-190°F. It is stated that, because of its excellent pile-on and level-dyeing properties at both low and high dyeing temperatures, Interchem Blue NBNJ is equally suitable for application on jigs and becks. When diazotized and developed with Developer BONA, it turns a dull red. This dye is not dischargeable, and it is not recommended for printing.

INTERCHEMIC BRILLIANT BLUE NSP

(Interchemical)

A nonsubliming disperse dye for dyeing and for printing acetate and nylon. It is said to be useful either as a self-shade for producing bright royal blue shades of good depth or in combinations with other selected Interchem dyes for producing nonsubliming browns, navies, and blacks and other compound shades. This dye can be

applied on jigs or becks. The color yield is said to be particularly good at temperatures of about 185°F, with good exhaustion, pile on, and level dyeing properties. Interchem Brilliant Blue NSP is reported to be an excellent color for application printing in all depths of shade. This dye is not dischargeable. When diazotized and developed with Developer BONA, the shade is destroyed.

IRGALAN* BLUE GL (Patented)
IRGALAN* VIOLET 5RL (Patented)

(Geigy)

The Irgalan range of colors has been expanded by the addition of the above products. These new types are said to possess extremely high all-around fastness properties, and to approach or exceed in this respect the fastest wool colors used heretofore. It is stated that these new additions possess almost the identical fastness properties of the preceding Irgalans, but that they draw and work exactly as the older colors and with each other, thus enabling the dyer to use them in combination like a homogeneous dyestuff. It is further stated that the same evenly penetrated, level results are obtained with these new colors on all types of woolen yarns and piece goods. They are said to be well adapted also for use on spun and filament nylon and on real silk, having the same high-quality fastness on these fibers as on wool.

* Trade-mark registered

LANASYN BORDEAUX RL paf

(Sandoz)

Sandoz states that this product, a rich shade of bordeaux, exhibits excellent dyeing and fastness properties, similar to the other colors in this series of neutral-metalized colors. Its fastness to light on spun or filament nylon is reported to be outstanding and surpassing other reds of similar shade. Dyeings of 1.5% are said to stand up to 300 hours in the Fade-Ometer.

LANASYN DARK VIOLET RL paf

(Sandoz)

This new addition to the Lanasyn line is recommended by Sandoz for the dyeing of wool on either stock, top, yarn or piece goods form. It is said to exhibit fastness properties equal to many chrome dyes. The manufacturer draws particular attention to its use in Vigoureux printing, as well as for regular printing on wool, silk or nylon. They recommend it as a valuable component in combinations for deep mode shades, and point out its suitability for dyeing at 225°F.

LANASYN YELLOW 3GL Paf

(Sandoz)

This new product is reported to be the greenest of all neutral-metalized type yellows on the market. Sandoz states that its dyeing and fastness properties on wool, nylon or silk are of the same high order as other colors in the series. It is further stated that particular attention is being drawn to its extreme fastness to light on nylon in the Fade-Ometer (L-7 to L-8). On wool it reportedly reaches L-7 without the reddening effect common with many acids yellows.

LANASYN YELLOW GLN paf

(Sandoz)

Replaces the former type, Lanasyn Yellow GL. It is similar in shade to the former brand but reportedly has a preferred slower drawing rate on nylon and is somewhat faster to light.

The shade of Lanasyn Yellow GLN paf is reported to be approximately in between Sandoz' reddest type, Lanasyn Yellow 2RL paf and their newest green type, Lanasyn Yellow 3GL Paf. The new product reportedly has excellent dyeing and fastness properties on wool, nylon and silk.

LATYL* BLUE 4R

(Du Pont)

This disperse dye is an interesting addition to the line of dyes for Dacron* polyester fiber and is characterized by a bluer shade and better economy in many shades than Latyl Violet BN. It can be used in the production of light to medium shades of tan, brown, gray and charcoal where its bluer shade is of distinct advantage. By using it in such combinations less shading is required with the greener Latyl Brilliant Blue BG or Latyl Brilliant Blue 2G than usually needed in similar mixtures employing Latyl Violet BN. Latyl Blue 4R is not recommended for use in navy shades.

It can be applied to filament or spun forms of Dacron from aqueous carrier baths, by pressure dyeing without a carrier and by the thermosol process. Light to medium shades applied from phenolic carrier baths require a dyeing assistant, such as Alkanol* HC surface-active agent, to effect leveling on Dacron. Latyl Blue 4R reportedly withstands 20 to 40 hours' exposure in the Fade-Ometer and exhibits very good fastness to wet processing. It dyes a light shade on acetate and nylon effects when dyeing Dacron from a carrier bath and shows no more staining of wool than Latyl Violet BN when dyeing 50/50 unions of Dacron and wool. The product also has good fastness to light and washing on Dynel, it is claimed.

* Registered trade-mark

LATYL* BLUE RL

(Du Pont)

This disperse dye produces red, bright shades of blue on Dacron* polyester fiber and is particularly recommended by Du Pont for use in the production of men's wear suiting shades of medium gray, tan, brown and others where a blue with good build-up is required. Brighter shades previously unobtainable are now possible with this new blue, it is claimed.

It is said to disperse readily, has good stability in the dyebath, builds up on tone to heavy shades and has good fastness to light and wet processing. It reportedly can be applied to either filament or spun forms of Dacron from aqueous carrier baths at atmospheric temperatures or at high temperatures without a carrier. Optimum pentration levelness and reproducibility of shade are said to be obtained by using approximately 2.0% of a nonionic surfactant such as Alkanol* HC surface-active agent in the dyebath in addition to the usual additives. Latyl Blue RL reportedly does not tar at ordinary dyeing temperatures of 208° to 212°F and is said to be satisfactory in this respect to high temperature, 250°F, application. Best results in aqueous dyeing at atmospheric temperatures are obtained by adding the dye after neutralization of the alkaline Dowicide A bath, it is stated.

Latyl Blue RL is of interest for use on acetate where it reportedly exhibits good build-up and good fastness to light, washing and gas fumes. These same properties are said to be obtainable on Arnel. On Acrilan, Latyl Blue RL reportedly exhibits good build-up and good wash fastness but light fastness is not so good as that on the other fibers mentioned. Very little staining of wool is evident when this product is used in dyeing the Dacron in wool-Dacron blends, it is claimed.

* Registered trade-mark

LATYL* DIAZO BLACK B

(Du Pont)

This disperse dye reportedly produces a full, rich shade of black on Dacron* polyester fiber when applied in high-temperature equipment. It is said to be noted for its economy and very good fastness properties. Blacks produced with this new dye are claimed to be much superior to those previously produced on Dacron with disperse dye combinations. A new procedure for applying a developed black to Dacron has been developed along with Latyl Diazo Black B, which is said to considerably reduce the dyeing time previously recommended.

Latyl Diazo Black B applied by the new process reportedly has produced highly successful results in commercial equipment on rawstock, continuous filament and staple-yarn packages in circulating machines, and on filament and staple fabrics in the Barotor. Indications also point to the use of the new dye and procedure on tops at 250°F and on openly constructed fabrics at 235°F in pressurized Burlington Engineering Machines. Latyl Diazo black B and the improved process are said to offer the following advantages in dyeing Dacron:

1) Much shorter dyeing cycle than necessary with a black employing Acetamine Developer AD Extra. Dyeing cycle now compares favorably with time required to apply a direct black to Dacron.
2) Greater economy than obtainable with previous combinations and the production of a much fuller and richer shade of black.
3) Considerably improved fastness to light, wet processing and crocking.

* Trade-mark registered

LATYL* YELLOW 3G

(Du Pont)

This disperse dye is said to make possible greener and brighter shades of yellow on Dacron* polyester fiber than previously obtainable with other disperse dyes. It can be applied to Dacron from aqueous carrier baths at atmospheric temperatures or at high temperatures without a carrier. Light fastness of carrier dyeings reportedly indicates a noticeable break with monotone fade after 40 hours' Fade-Ometer exposure while high temperature dyeings show a similar break between 40 and 80 hours. Dyeings by either method are said to show very good wet fastness.

Latyl Yellow 3G reportedly exhibits good build-up on Dacron and can be readily added to dyebaths for shade adjustments. It is not a completely nonsubliming dye but is much superior in this respect to Latyl Yellow YL or Celanthrene* Fast Yellow GL Conc 300%. Latyl Yellow 3G is suitable for printing pastel to light shades on Dacron and, because of its good fastness properties, is of interest for light shades on type 42 Orlon* acrylic fiber. When dyeing blends of Dacron and wool this new dye reportedly stains wool only slightly in medium to full shades.

* Registered trade-mark

LENRA* DYES

(American Aniline)

*LENRA DEVELOPED BLACK JRW
*LENRA BLUE FFG
*LENRA BLUE RLS
*LENRA GREEN BLUE II CONC
*LENRA ORANGE BL
*LENRA RED Y
*LENRA RED 2B
*LENRA YELLOW CW
*LENRA YELLOW R

This comprehensive line of dyestuffs, designed for the dyeing of Arnel triacetate fiber, may be applied in conventional equipment capable of maintaining temperatures during dyeing of 200°F or better. Where heavy shades are desired it may be advantageous to incorporate a carrier, such as tripropyl phosphate or methyl salicylate, in accordance with the recommendation of the manufacturer of the fiber. These colors have been selected and developed with the primary consideration of meeting the "wash and wear" requirements of Arnel. In addition, careful consideration had to be given to their fastness to sublimation because of the heat treatment necessary in the proper finishing of Arnel.

* Trade-mark regis pending

LUMICREASE RED VIOLET 3LB

(Sandoz)

This direct dye, said to be of sufficient fastness to light to pass the severe Florida sunlight test for automobile fabrics, reserves acetate and only slightly tints nylon.

Urea-formaldehyde treatment reportedly causes no change of shade or loss in light fastness. A 1.0% dyeing rates L-7 in the Fade-Ometer, it is claimed.

LUMICREASE YELLOW EFUL

(Sandoz)

The latest addition to this series of direct dyes reportedly exhibits the highest fastness to light in daylight as well as in the Fade-Ometer,

and this fastness is said to hold after anti-crease treatment. It is also said to have superior fastness to perspiration and washing with resin treatments.

Sandoz claims that the product's perfect reserve of nylon and acetate, coupled with its unsurpassed light fastness in sunlight has made it the preferred yellow for automobile fabrics.

LUXOL* FAST RED SN

(Du Pont)

This is a stable red component for use in glycol-base ball-point pen inks. It has light fastness equal to Luxol Fast Red B and 2B and Luxol Fast Scarlet C but is more stable than these types on storage when loaded into ball-point pen fillers.

* Registered trade-mark

LUXOL* FAST YELLOW LN

(Du Pont)

This spirit-soluble dye produces a red shade of yellow with considerably better light fastness than other Luxol yellows. Its primary use is in lacquers to produce light fast gold shades on aluminum foil. Additional uses for the product include ball-point pen inks, spirit printing inks, woodstains and other applications where Luxol types are required.

* Registered trade-mark

MAYVAT* PINK B DOUBLE PASTE

(May)

A thioindigoid vat dyestuff, which is said to be especially suited for discharge printing since it is not affected by the additional amount of sodium formaldehydesulfoxylate necessary in this type of work.

* Registered trade-mark

NATIONAL ALIZAROL VERDON S

(National)

A nondusting chrome dye applicable to wool by the top-, meta- and bottom chrome methods of dyeing. It produces subdued bluish-green shades, with the top-chrome method yielding the brightest shades. It reportedly exhibits good light fastness in medium and heavy shades; very food fastness to cross dyeing, fulling, crabbing and shrinkproofing; and excellent fastness to other wet processing including carbonizing. It is said to be suitable for coloring materials that are to be resin finished for crease resistance, and for coloring carpet yarns and knitting yarns for sweaters and bathing suits. This product is more adaptable for raw stock and slub work than for piece goods because of its fast drawing properties.

NATIONAL BLACK K SALT

(National)

A stabilized diazonium salt producing, on cotton and viscose rayon, jet black shades when combined with National Naphthols AS-BG, AS-BS and AS-SW; reddish black shades are obtained when coupled with most of the other National Naphthols. Most of these colors reportedly possess very good to excellent fastness to light, washing, soda boil, hot pressing and other wet processing. This product may be applied on the continuous padding range, in pressure package machines, and in open tubs. It is said to be suitable for application by the various printing processes, and many of the combinations reportedly may be discharged to good whites with hydrosulfite discharge pastes. It is stated that this product is suitable for use on materials for sport and work clothes, children's play clothes, prints and materials to be rubberized.

NATIONAL CARBANTHRENE BLACK BROWN VA PASTE

(National)

An anthraquinone vat dye which reportedly produces, on cotton and rayon, blackish brown shades of maximum fastness to light and excellent fastness to most wet processing including boiling soap and staving. It is said to reduce readily at 120° F in a weakly alkaline bath to a red violet leuco and is usually dyed at the same temperature. It is stated that this dye is well suited for application in pressure-dyeing equipment and may also be applied by the various pigment-impregnation methods. It is recommended by National for coloring materials that are to be resin finished for crease resistance and for the production of materials that must possess exceptional fastness to light and commercial laundering.

NATIONAL CARBANTHRENE NAVY BLUE G DOUBLE PASTE

(National)

An anthraquinone vat dye producing, on cotton and rayon, greenish-navy blue shades. It is said to be unaffected by the presence of metals in the dyebath; suitable for use in all types of dyeing equipment and may also be applied by the various pigment impregnating methods as well as the reduced bath method. A nondrying paste, this dye is reported to be well adopted for printing. It is stated that an outstanding charcteristic of this product is its excellent fastness to water spotting. In addition, it reportedly exhibits excellent to maximum fastness to light and very good to excellent fastness to most wet fastness tests including washing and chlorine. This product is recommended by National for the production of materials that must possess exceptional fastness to light and commercial laundering.

NATIONAL CARBANTHERENE PRINTING BLACK BBD DOUBLE PASTE

(National)

This anthraquinone vat printing paste is a grit-free, nondrying homogeneous paste, which produces jet black shades on cotton and rayon. It reportedly possesses maximum light fastness and very good to excellent fastness to most wet processing. The outstanding characteristic of this dye is said to be its very good fastness to rubbing. National recommends this product for the production of printed materials that must possess exceptional resistance to light and commercial laundering.

NATIONAL NIAGARA COPPER BLACK BROWN

(National)

This nondusting direct dye is seldom employed as a simple direct dye, but is usually after-treated with copper-resin compounds. When aftertreated with urea-formaldehyde and National Naccutix, it produces black-brown shades on cotton and rayon, with appreciably heavier and redder shades obtained on rayon. It reportedly possesses moderate light fastness; good fastness to perspiration, acid and alkali; very good fastness to washing; and excellent fastness to rubbing, sea water and water. This product is said to produce a very popular shade and also to be suitable for shading purposes in dark colors.

NATIONAL SOLANTINE BROWN 4RLVF

(National)

A nondusting direct dye producing, on cotton and rayon, moderately bright shades of red-brown. This dye reportedly possesses high tinctorial value, can be applied at low temperatures, possesses good light fastness in direct dyeings, and retains fairly good fastness when aftertreated with crushproofing resins. It is said to exhibit very good fastness to washing, acids, rubbing, water and sea-water bleeding; excellent fastness to perspiration, water spotting and hot pressing. It is also suitable for application to leather and paper. This product is adaptable for the production of rayon and cotton suitings, hosiery, bathing suits and coloring cotton carpet yarns.

NATIONAL SOLANTINE GREEN BL

(National)

This nondusting, fast-to-light direct dye reportedly possesses excellent solubility and yields moderately bright shades of green on cotton, viscose rayon and leather. It is said to exhibit very good fastness to light, rubbing, staving, dry and wet heat, drycleaning, and perspiration; and excellent fastness to water and sea water. This product is reported to be suitable for coloring cotton carpet yarns, hosiery, bathing suits, upholstery and materials to be rubberized.

NATIONAL SOLANTINE ORANGE EGL

(National)

This nondusting direct dye, said to be of excellent solubility, produces moderately bright shades of yellow-orange on cotton and rayon. According to National, it is practically unaffected by the presence of metals in the dyebath, leaves nylon and acetate practically unstained, levels well, and may be applied at low temperatures. It reportedly possesses good fastness to washing, alkali and cold-water bleeding; very good fastness to light; excellent fastness to mercerizing, cold-water spotting, sea-water bleeding, hot pressing and rubbing. It also is said to discharge to an excellent white with neutral discharge paste.

NEOLAN BLUE FR

(Ciba)

This product is said to yield an attractive shade of blue which shows very good fastness to light, washing, perspiration and alkali. Dyeings also are said to exhibit very good fastness to carbonizing, staving and decatizing. Neolan Blue FR is readily soluble. It reportedly reserves cotton, viscose and acetate effect threads pure white. The shade does not appear redder in artificial light.

NEUTRALAN OLIVE GREEN B
NEUTRALAN OLIVE GREEN 2BA
NEUTRALAN NAVY BLUE
NEUTRALAN BLACK

(Pharma)

These further additions to the Pharma Neutralan line of water-soluble metalized dyestuffs for nearly neutral application on wool, silk and nylon reportedly give unusually level shades in all strengths with a very short time for application. The resulting shades are said to have very good light fastness, wash fastness, fulling, carbonizing and perspiration fastness. Because of the short application time, it is stated that the texture and quality of the wool are not impaired.

NEUTRANYL COLORS

(Belle)

A new line of dyestuffs developed especially for the neutral dyeing of nylon. All colors are said to dye level and leave acetate unstained. Good fastness to light and washing reportedly are obtained in light to medium shades, but excellent fastness to washing in all depths of shade is claimed when dyeings are aftertreated with Bellefix N-100. The following shades are available:

NEUTRANYL FAST BLACK G
NEUTRANYL FAST BLUE 2G
NEUTRANYL FAST BLUE RB
NEUTRANYL FAST BROWN 2R
NEUTRANYL FAST GREEN 5G
NEUTRANYL FAST GREY 2BN
NEUTRANYL FAST MAROON 2RB
NEUTRANYL FAST NAVY BR
NEUTRANYL FAST ORANGE 5R
NEUTRANYL FAST RED RGS
NEUTRANYL FAST RED 5B
NEUTRANYL FAST SCARLET B
NEUTRANYL FAST VIOLET 2R
NEUTRANYL FAST YELLOW 3G
NEUTRANYL FAST YELLOW RN

NOVA VAT BRILLIANT INDIGO 4BR

(Nova)

This thioindigo vat color, which is available in paste as well as concentrated powder form, possesses the known fastness properties for this type.

NOVALAN YELLOW N
NOVALAN ORANGE G
NOVALAN ORANGE R
NOVALAN FAST PINK BN

NOVALAN FAST RED 2B
NOVALAN BORDEAUX RN
NOVALAN BRILLIANT BLUE B
NOVALAN DARK GREEN B
NOVALAN BLACK WA

(Nova)

The Novalan colors augment the range of Pilato Fast colors and also represent metallized acid dyestuffs. They reportedly exhibit excellent solubility, leveling and all-around fastness properties and are used on wool and polyamide fibers according to standard dyeing procedures.

NOVANTHRENE BRILLIANT GREEN 3B

(Nova)

This anthraquinone dyestuff is available as a dispersed powder or in paste form. It reportedly has excellent fastness properties, including a light rating of 7 in darker shades. Tinctorially it exhibits a strong bluish green shade.

NYAGENE BLACK 3B CONC

(Nyanza)

This color is said to be level dyeing and is recommended by Nyanza for dyeing as a direct as well as a developed color for light greys and blacks.

It is claimed to be especially useful as a direct dyeing color on rayon material containing acetate and wool effects which must be left white.

This color is said to show no change in shade on fabrics when treated with resin or resin with copper salts. This aftertreatment reportedly produces shades with outstanding wash fastness.

NYANTHRENE BLACK BROWN VA PASTE

(Nyanza)

A new addition to the Nyanza group of anthraquinone vat dyes. Recommended by the Company principally for dyeing dark brown shades on cotton or rayon either as a self shade or in combination with other vat colors. It is said to possess excellent fastness to light, washing and chlorine, and to be suitable for application by any conventional method on all types of dyeing equipment.

NYANTHRENE BRILLIANT ORANGE RK

(Nyanza)

An important addition to Nyanza's line of anthraquinone vat colors, this new product is said to produce a rich, bright orange with a light fastness rating of 7-8 and to have excellent fastness to washing, chlorine and mercerizing.

It is reported suitable for application by all conventional methods on all types of dyeing equipment. Available in paste and powder form.

NYANTHRENE GOLDEN ORANGE G DOUBLE PASTE

(Nyanza)

This anthraquinone-derived color is claimed to be suitable for both dyeing and printing, and reportedly produces full and medium shades of good light fastness.

The color is highly dispersed and is recommended by Nyanza for package dyeing.

NYANTHRENE GOLDEN ORANGE RRT PASTE

(Nyanza)

A highly dispersed anthraquinone vat dye stated to produce clear, bright orange shades on rayon and cotton having excellent all-around fastness. The color is reported suitable for printing and dyeing in all the various machines.

NYANTHRENE GOLDEN YELLOW GK DOUBLE PASTE

(Nyanza)

This vat dye, belonging to the anthraquinone series, is said to produce clear, golden yellow shades of good all-around fastness and to be applicable in various types of machines by the pigment-pad method as well as by the reduced-bath method. The color is also reported suitable for printing in heavy or light shades.

NYANTHRENE GOLDEN YELLOW RK DOUBLE PASTE

(Nyanza)

This vat dye belongs to the anthraquinone series. It is stated that this color produces a fairly bright shade of a reddish yellow that can be applied by the reduced-bath method or the pigment-impregnation method.

Nyanthrene Golden Yellow RK Double Paste reportedly possesses excellent light and wash fastness and is suitable for printing in light shades.

NYANTHRENE OLIVE R

(Nyanza)

An anthraquinone vat dye recommended by Nyanza for application on cotton and rayon by all the usual methods of dyeing. It is reported that the color produces an olive grey shade of excellent all-around fastness and is suitable in combination shades as a dulling component.

It is available in paste and powder form.

NYANTHRENE OLIVE TR PASTE

(Nyanza)

An anthraquinone vat dye said to have excellent all-around fastness and very level dyeing properties. It is reported suitable for dyeing by any method and is an important component for dyeing military shades. It is stated that its light fastness in pale shades is outstanding.

NYLON BLACK NDJ

(Sandoz)

This specialty is recommended by Sandoz for the dyeing of nylon tricot where maximum fastness to washing, perspiration, salt water, cold water, crocking and hot-wet pressing are desired.

OFNA-PERL SALT SBR (Patented)

(Progressive)

This is a fine dispersion of a stabilized diazo compound, which reportedly may be applied from the same bath with naphthols to exhaust on nylon at 160°F. It is claimed that, by a simple aftertreatment with diluted mineral acids, shades of excellent fastness properties are developed on the fiber without a barré effect. Ofna-perl Salt SBR is said to produce grey and black shades of outstanding fastness properties when used in combination with Naphtol AS-SG and AS-SR. Brown shades are obtained with Naphtol AS-LB, AS-L3G, and AS-SG. This product supplements Ofna-perl Salt RRA and Ofna-perl Salt BBA, which produce yellow, red, violet and blue shades.

OIL AMBER AAP

(American Aniline)

A new addition to AAP's line of oil colors. This color reportedly exhibits excellent solubility in gasoline and other petroleum products and is said to be particularly well suited for these applications because of the extremely low insolubles in these solvents. Oil Amber AAP reportedly has been physically conditioned to be readily soluble and easily handled in petroleum applications.

OMEGA CHROME OLIVE GL Pat

(Sandoz)

Sandoz claims that this product surpasses all existing chrome olives or greens in fastness to light, especially when dyed metachrome. In addition, it is said to have excellent fastness to fulling, carbonizing, perspiration and cross dyeing. It is also said to be one of the few colors which will stand heavy decatizing as well as the severe test of potting. Sandoz recommends it highly as a base for government OD fabrics, as well as mode shades for highest grade men's wear.

PAD COLORS*

(Pad-Dye)

This is a complete line of pad-dyeing colors for use in padding of cellulose acetate, nylon and mixed fabrics of acetate and rayon.

It is claimed that, with the Pad Colors, each of these fabrics can be padded with greater economy to yield properties equivalent to goods dyed by conventional methods. It is stated that these products are suited for continuous color processes by either the pad-steam or pad-hot water method.

The colors are padded from a water medium without need for a solvent.

* Patent Pending

PARANOL FAST ORANGE 2GL

(Nyanza)

This color reportedly produces a bright full shade of orange for direct dyeing of cotton and viscose. It is said to have exceptional light fastness and good wash fastness. It is recommended by Nyanza for union upholstery fabrics as it reportedly stains wool very little and leaves acetate white while nylon is stained slightly. Viscose and cotton dye a close union, it is reported.

PERMANENT CARMINE FR DISPERSED PULP

(General Dyestuff)

A straight azo pigment of bright, bluish-red shade, which is claimed to be unexcelled among azo reds in fastness to light, alkali, and acid and in nonbleeding in most organic solvents. It is said to contain well-dispersed particles averaging 0.5 micron in diameter, virtually all of which are less than 1.0 micron in size; the dispersing agent present is anion-active. This pigment is especially recommended by GDC for use in spun-dyed Bemberg and viscose rayon, in which it is reported to withstand more than 200 hours of exposure in a Fade-Ometer without fading. It is also recommended for the preparation of pigment-printing pastes for textiles and the coloring of latex and emulsion paints.

PERMANENT RED TPF PASTE

(General Dyestuff)

A straight, fast-to-light, thin-pouring azoic pigment recommended by GDC for coloring paper pulp in a beater, especially Kraft for the manufacture of twisting tissues that must have superior light fastness and for emulsion paints. It is said to be unaffected by wet-strength resins or chlorine bleach.

PHARMA ALIZARINE BLUE A
(Pharma)

This is an indigoid, bright, reddish blue for acid dyeing on wool, silk and nylon.

PHARMA CHROME GREY GLS

(Pharma)

This product is a clear shade of grey intended to be applied to wool by the conventional chroming methods. It is especially recommended by Pharma for top and metachrome dyeing. It is reported to have excellent properties generally.

PHARMA FAST RED SALT ITR
PHARMA FAST RED SALT TR

(Pharma)

These are stabilized water-soluble diazo salts, especially prepared for application on cotton and viscose rayon by all the printing and dyeing processes generally employed for this class of color. Economical reds are produced with the general excellent fastness of this class, it is claimed.

PHARMACID RED E

(Pharma)

This is a very bright, light yellowish red for dyeing wool, silk and nylon by acid methods. It is described as a general purpose color with good properties.

PHARMANTHRENE BRILLIANT INDIGO 4B PASTE

(Pharma)

This is an indigoid vat type especially prepared for printing cotton and viscose rayon. It is reported that attractive, clear, light blue to navy shades are obtained. The product is

said to have excellent printing properties with moderate light and chlorine fastness.

PHARMANTHRENE GOLDEN YELLOW RK DOUBLE PASTE

(Pharma)

This is an anthraquinone vat type especially prepared for printing cotton and viscose rayon. The product reportedly has excellent printing properties, excellent light fastness and wash fastness.

PHARMANTHRENE PRINTING VIOLET 6R PASTE

(Pharma)

This is an indigoid vat type especially prepared for printing cotton and viscose rayon. It reportedly is suitable for both light and heavy shades.

PHARMANTHRENE YELLOW GCD DBL PASTE

(Pharma)

This is an anthraquinone vat type especially prepared for general vat dyeing on cotton and viscose rayon. It is not recommended for machine dyeing. It is double the strength of Pharmanthrene Yellow GCD Paste (Single) and produces the same shade. However, the "single" type only is recommended by Pharma for all machine-dyeing and pigment-dyeing methods.

PHORWITE DPS

(Pharma)

An optical white for cellulosic fibers to be applied by both pad and dyeing methods. The product reportedly has excellent high solubility, 40%.

PHORWITE WANS

(Pharma)

An optical white for wool, acetate, nylon and silk. The whitener is applied cold or warm, but not hot. Acetic or formic acid in small quantities may be used to intensify the white on wool and nylon.

PHORWITE WCN

(Pharma)

An optical white for both cotton and viscose rayon in neutral baths and wool and nylon in acid baths. It is applied simultaneously with color at dye-bath temperatures, for bright and light shades on wool. The whitener may be applied on cotton or viscose rayon for substantive shades which do not give clear whites when discharged. The product is said to resist hydrosulfite, leaving excellent whites.

PILATE FAST YELLOW GRN
PILATE FAST YELLOW ELN
PILATE FAST ORANGE GEN
PILATE FAST RED GREN
PILATE FAST NAVY BLUE RRN
PILATE FAST BLUE BN
PILATE FAST BLUE GGN EXTRA CONC
PILATE FAST BLUE GGN

(BASF-Nova)

These colors are metallized acid dyestuffs which are said to possess superior solubility and excellent leveling properties in dyeing wool and polyamide fibers. They are used according to standard procedures with sulfuric acid. They reportedly exhibit excellent fastness to light and washing.

PONSOL* RED RL PASTE

(Du Pont)

An anthraquinone vat dye that produces bright, bluish shades of red on both cotton and rayon. It reportedly exhibits outstanding fastness to light when subjected to exposure in the Fade-Ometer or to Florida sunlight under glass and possesses the advantage of showing a monotone fade at all strengths. The product is recommended by Du Pont as a shading component for tan, gray and beige shades and can also be used in the production of deep wines and maroons. Ponsol Red RL Paste is said to be particularly suitable for coloring materials to be used for dress goods, drapery and awning fabrics or other materials where a high degree of light fastness is required.

It reportedly shows very good vat stability at temperatures up to 190° F and is said to be suitable for all types of application. It performs well in package machines when dyeing yarn by either pigment or reduced methods and produces speck-free, level dyeings on piece goods in pigment pad-steam or pigment pad-jig operation, it is claimed.

* Registered trade-mark

PONTACYL* SCARLET NN

(Du Pont)

This acid dye produces a yellow shade of scarlet and is especially recommended by Du Pont for application to nylon taffeta or tricot fabrics because of its good barre coverage. It reportedly shows very good neutral dyeing properties and relatively good light fastness.

* Registered trade-mark

PONTAMINE* FAST BLUE 3RLN

(Du Pont)

A fast-to-light direct dye especially developed for its nonstaining properties on nylon when dyeing blends composed of cellulosic fibers and nylon. It is equal in strength, appreciably greener and brighter in shade and has similar fastness properties to Pontamine Fast Blue 3RL on both cotton and rayon.

It reportedly has good solubility, 40.0 g/l, both hot and after cooling, dyes levelly and exhausts well at temperatures of 120° to 205° F. Better exhaustion is said to be obtained on cotton when a dyeing is made at 200° to 212° F and finishing by cooling back to 160° F. The dye is suitable for padding and for application to all forms of cotton and rayon in open or closed equipment.

Pontamine Fast Blue 3RLN is recommended by Du Pont for dyeing spun rayon either alone or in blends with nylon for end uses such as suitings, dress goods, sportswear, upholstery and drapery fabrics. Wet fastness properties are said to be appreciably improved by an after-treatment with fixing agents or resins, although such treatments have a tendency to change the shade. Most fixing agents and melamine-type resins adversely affect light fastness while urea-formaldehyde resins show only a negligible effect, it is stated.

Pontamine Fast Blue 3RLN is also of interest for application to paper because of its good value and fastness to light.

* Registered trade-mark

PYRAZOL FAST ORANGE LUF

(Sandoz)

A new addition to Sandoz' LU series of direct dyes, L signifying excellent fastness to light and U, suitability for urea-formaldehyde aftertreatment. The Company reports it to be the reddest orange in its LU group and outstanding for

1) Good dyeing properties and penetration in package dyeing or tightly-woven piece goods.
2) Excellent reserve of acetate and nylon.
3) Good union on cotton and viscose.
4) Excellent fastness to light and washing when treated with urea-formaldehyde resin.

PYRAZOL FAST RED BROWN 3RUL CONC

(Sandoz)

This recent addition to the UL series is said to be especially suited for urea-formaldehyde treatment without any loss of the extraordinary light fastness in direct dyeings. It is said also to possess excellent fastness to washing, perspiration and crocking when aftertreated with resins, either alone or in conjunction with Sandofix WE 51 or Cuprofix.

PYRAZOL FAST SKY BLUE 6GUL

(Sandoz)

Sandoz calls this its fastest-to-light direct blue for urea-formaldehyde treatment. It is said to possess wet fastness properties and excellent reserve of nylon and acetate.

RAPIDOGEN* BLACK J

(General Dyestuff)

A stabilized azoic composition in powder form recommended by GDC for printing very deep rich blacks at a concentration of only 4%. These blacks are claimed to be very economical and also to be very fast to severe washing (washing, IV 4-5) and therefore suitable for table linen, shirtings, pajamas, and other washable items for which fairly good (4) light fastness suffices. It is also recommended for rayons that are to be anticrease-finished.

* Registered trade-mark

RONAGEN BLACK IL

(Nova)

This stabilized azoic black reportedly possesses excellent fastness to light, chlorine and bleaching. It is said to be fast to formaldehyde, which will not cause change of shade. Unlike most stabilized azoic blacks, Ronagen Black IL reportedly will not bleed out and stain whites during the soaping operation. It is developed in acid fumes. The product is offered in powder form.

RORACYL* DARK GREEN B

(Du Pont)

This acid dye was developed especially for application to Orlon* acrylic fiber by the cuprous-ion method. It is said to be applicable to all forms of Orlon by the usual cuprous-ion dyeing techniques. When used alone or in combination with other suitable acid dyes, it reportedly produces shades with outstanding fastness to light and very good fastness to wet processing.

* Registered trade-mark

SANDOTHRENE BLACK NDRB PASTE ULTRASPERSE

(Sandoz)

A highly dispersed vat color of anthraquinone derivation. It is described as a direct-type vat-black yielding bloomy shades of excellent fastness, and is recommended by Sandoz for use on all types of machines. It reportedly possesses very good money value, stands high temperatures well and is a very good shading element for dark navies.

SANDOTHRENE BLUE NGR PASTE ULTRASPERSE

(Sandoz)

A highly dispersed vat color of anthraquinone derivation. It reportedly is characterized by very level dyeing, good working properties, and very little shade change on soaping. It is claimed to be the best of all blues with regard to chlorine and it reportedly possesses excellent light fastness in all depths of shade. It is especially recommended by Sandoz for the pad-steam continuous method.

SANDOTHRENE BRILLIANT GREEN N2BF DOUBLE PASTE ULTRASPERSE
SANDOTHRENE BRILLIANT GREEN NBF DOUBLE PASTE ULTRASPERSE
SANDOTHRENE PRTG BRILLIANT GREEN NBF DOUBLE PASTE ULTRASPERSE

(Sandoz)

A highly dispersed, free flowing, anthraquinone vat paste manufactured in both printing and dyeing forms. It is said to be tinctorially strong and to exhibit good penetrating, leveling and exhausting properties. This color reportedly produces brilliant jade green shades of unexcelled all-around fastness and is recommended by Sandoz for use in all types of dyeing and printing machines. Sandothrene Brilliant Green NBF Double Paste Ultrasperse is brighter in tone than Sandothrene Brilliant Green N2BF Double Paste Ultrasperse; otherwise all properties are similar.

SANDOTHRENE DIRECT BLACK NDM DOUBLE PASTE ULTRASPERSE

(Sandoz)

A vat paste of the anthraquinone series which is said to be very strong tinctorially and to possess very good all-around fastness. The color

is said to be characterized by its rapid exhaustion and yields a redder tone on viscose than on cotton. It is especially recommended by Sandoz as a shading element for navies and yields a bloomy black in full depths.

SANDOTHRENE GREEN 2B DOUBLE PASTE ULTRASPERSE

(Sandoz)

This highly dispersed anthraquinone vat dye is recommended by Sandoz for the production of cheap bottle green shades not requiring chlorine fastness. It reportedly stands high temperatures very well and is a good shading element for dark navy shades.

SANDOTHRENE GREY NLN PASTE ULTRASPERSE

(Sandoz)

An anthraquinone vat dye producing reddish grey shades. Reportedly of good fastness to light and laundering, it is especially recommened by Sandoz for dyeing shirtings, industrial uniforms, draperies and dress goods. It is said to be characterized by its rapid exhaust rate and ability to build well.

SANDOTHRENE PRTG GOLDEN YELLOW NGK DOUBLE PASTE ULTRASPERSE

(Sandoz)

This highly dispersed vat color of anthraquinone derivation is said to be suitable for the economical production of bright golden-yellow shades on cotton, and is recommended by Sandoz for colored discharge printing on viscose. This color is said to be tinctorially strong and to possess good fastness to light, chlorine, crocking and washing. It reportedly reduces rapidly and completely in the ager and is easily re-oxidized.

SANDOTHRENE PRTG RED ORANGE NG PASTE ULTRASPERSE

(Sandoz)

This free-flowing anthraquinone vat color is reported suitable for direct and discharge printing and for resist styles, possessing good fastness in heavy to medium shades. It is claimed to be the best money value of the golden orange types. It is a good base for orange-brown and luggage shades.

SANDOTHRENE RED N6B PASTE ULTRASPERSE

(Sandoz)

A highly dispersed anthraquinone vat dye reportedly of high tinctorial power for use in the production of heavy reds and maroons. This color reportedly possesses good all-around fastness except to crocking in dark shades. It is recommended by Sandoz for use in high-temperature dyeing. It is pointed out, however, that the fabric must be well soaped after dyeing to obtain true shade and fastness qualities.

SANDOTHRENE RED N2R DOUBLE PASTE ULTRASPERSE

(Sandoz)

An anthraquinone-type dyestuff manufactured as a highly dispersed pigment in free-flowing paste form. It is said to be of particular interest for dyeing towels, shirtings and awnings requiring maximum fastness to laundering and weather exposure. It is reported to be an outstandingly level-dyeing color for use on all types of dyeing machines.

SANDOTHRENE VIOLET NBN DOUBLE PASTE ULTRASPERSE

(Sandoz)

This highly dispersed anthraquinone vat dye reportedly possesses excellent level dyeing characteristics with very good light fastness and excellent chlorine fastness. It is said to show very slight alteration to heat and moisture, and is recommended by Sandoz for use on all types of dyeing machines.

SANDOTHRENE VIOLET N4R DOUBLE PASTE ULTRASPERSE
SANDOTHRENE PRTG VIOLET N4R DOUBLE PASTE ULTRASPERSE

(Sandoz)

A vat paste of the anthraquinone series, recommended by Sandoz or both printing and dyeing. It is said to be very strong tinctorially and to find use primarily where bright bluish violet shades are required. The color reportedly exhausts well and is suitable for high-temperature dyeing. It is said to have very good all-around fastness but is sensitive to moisture and hot pressing.

SETACYL* BLUE BN NEW (4-15272)

(Geigy)

Described as an economical blue for acetate and nylon with excellent dispersion, this new dyestuff is said to draw and pile up well at low temperatures. It reportedly is well suited as a base for navies and blacks and the blue component in heavy browns.

* Registered trade-mark

SEVRON BLUE 5G**

(Du Pont)

This cationic dye is especially recommended by Du Pont for the production of turquoise and deep, bright blue shades on type 42 Orlon* acrylic fiber. It reportedly possesses fairly good light fastness and good fastness to wet processing, and its bright, greenish-blue shade is useful in formulating deep green, brown and gray shades in combinations with other cationic dyes. It is not of interest as a component in tan and gray shades for men's wear since it does not possess required light fastness for this purpose.

It is said to have good stability in neutral and mildly acidic dyebaths, building up somewhat faster than other Sevron dyes and exhausting well. Strengths up to 3.0%, and particularly light shades, require a retarder for optimum levelness. Du Pont Retarder LAN is specifically recommended by the company when dyeing turquoise shades employing Sevron Green B in conjunction with Sevron Blue 5G. Alkaline dyebaths reportedly change the shade of Sevron Blue 5G appreciably redder while weakly acid or neutral conditions have no effect upon its shade or strength.

This product is also of interest for dyeing the Orlon portion in wool-Orlon since it is said to show only a slight stain on the wool.

* Registered trade-mark
** Trade-mark

SEVRON ORANGE L**

(Du Pont)

This cationic dye produces a bright reddish shade of orange on Orlon* acrylic fiber and reportedly has very good fastness to light and wet processing. Combinations of Sevron Orange L, Sevron Red L and Sevron Blue 2G are recommended by Du Pont for the production of light to medium shades of tan and gray with fastness properties suitable for men's wear. Sevron Orange L is also said to be excellent for use in the production of deep, pleasing shades of black.

Sevron Orange L is said to be preferably applied from a relatively neutral dyebath, pH 6.0 to 8.0. The temperature should be as close to the boil as possible for applying it at atmospheric pressure; higher temperatures, up to 225°F, are recommended by Du Pont for dyeing in pressurized machines. A retarder is not required for heavy shades but is necessary to control levelness in light shades, it is stated.

Sevron Orange L is said to be especially suited to the production of a wide range of shades where good fastness to light is essential. Tan shades on type 42 Orlon made with Sevron Orange L and Sevron Red L in the combination are said to exhibit a redder shade change when exposed in the Fade-Ometer. Original shades reportedly are returned by laundering. This new dye can also be applied to blends of type 42 Orlon and wool by recommended procedures, it is stated.

* Registered trade-mark
** Trade-mark

SEVRON RED L**

(Du Pont)

This cationic dye reportedly produces attractive red shades on Orlon* and possesses very good fastness to light and wet processing. It is said to be of special interest for use with other Sevron dyes to produce popular medium brown and light to medium gray shades on men's wear. It reportedly shows good buildup in strengths up to 4.0% on weight of the Orlon. A small amount of Sevron Red L used with Sevron Orange L and Sevron Blue 2G can be used to produce attractive tan shades with better lightfastness than could previously be obtained with other cationic dyes, it is claimed.

The application of Sevron Red L is said to be best accomplished in an essentially neutral dyebath with the pH between 6.0 and 8.0 at a temperature as close to the boil as possible. A wide range of shades can be produced with Sevron Red L in combination with Sevron Orange L, Sevron Blue B, Sevron Blue 2G and Sevron Brilliant Red 4G, all of which reportedly can be applied under the same pH conditions.

Sevron Red L can be used satisfactorily with Sevron Yellow L, Sevron Yellow R and Sevron Green B but it is reported necessary to maintain a pH of approximately 5 to insure the stability of all the dye components and obtain optimum exhaustion. A lower pH than recommended is said to cause Sevron Red L to produce an appreciably bluer and brighter shade that is sensitive to alkaline wet processing in that it becomes yellower.

Sevron Red L is also said to be excellent for coloring the Orlon portion of wool-Orlon blends. It is reported that little change is anticipated in present mill procedures because the buffering action of the wool is said to aid in maintaining the required pH.

A retarder is said to be necessary in the dyebath to obtain optimum levelness and fastness when dyeing light to medium shades on Orlon.

* Registered trade-mark
** Trade-mark

SOLOPHENYL* BLUE GLS

(Geigy)

This is described as an economical, level-dyeing, fast-to-light blue that is suited for subsequent finishing with urea-formaldehyde, which has little effect on the shade and light fastness. It is reported that the already good wash and wet fastness properties can be further improved by aftertreatment with Gycofix 67.

A unique feature is said to be remarkably good acetate and nylon reserve.

* Registered trade-mark

SOLOPHENYL* BRILLIANT GREEN 5GL

(Geigy)

It is felt by Geigy that this new color is probably the brightest and yellowest shade of green with good light fastness now on the market as a homogeneous dyestuff.

The wash fastness is said to be naturally improved by an aftertreatment with Gycofix 67 when applied as a fixative on cotton or on spun rayons in conjunction with TBL finish. The brilliancy of shade is said to be unaffected by such aftertreatment.

* Registered trade-mark

SOLOPHENYL* BROWN 3RL

(Geigy)

This new product is reported to be distinguished by its exceptionally good light fastness and its suitability for application to rubberized cottons and rayons. It produces a red shade on brown with sufficient brightness to permit its being used as a red orange for shading purposes.

It is also claimed that melamine- and urea-formaldehyde finishes affect the shade and light fastness only slightly, while the even drawing rate and good migration are said to produce exceptionally level results.

* Registered trade-mark

The color is especially recommended by Geigy for rubber-backed chenille rugs and upholstering fabrics as well as for creaseproof spun rayons.

SPECTROSOL* BLACK RP DOUBLE SOLUTION
SPECTROSOL* BLACK RT DOUBLE SOLUTION
SPECTROSOL* BLACK RA DOUBLE SOLUTION

(Hilton-Davis)

Theseo prducts are stabilized azoic compounds for fast-color printing on cotton and rayon. The deep shades of black produced are economical and fastness properties are good, it is claimed. They are offered in solution form for ease in handling and application. These Spectrosol Blacks are said to be fast to formaldehyde and, therefore, suitable for over-printing with resin-bonded pigment colors.

* Trade-mark

SULFOGENE* CARBON 4RP

(Du Pont)

This sulfur dye is a highly water dispersible pigment especially developed for use in coloring paper stock. It is used only for beater dyeing and can be added directly to the pulp in the beater. It is used primarily in producing gray shades where good light fastness is required, such as twisting papers in fiber rugs.

* Registered trade-mark

SULFOGENE* CARBON T

(Du Pont)

This sulfur dye is a nondusting product in grain form especially developed for the production of bloomy black shades on cotton. When it is aftertreated with sodium bichromate and acetic acid it yields brighter, fuller blacks on cotton piece goods than other dyes in the Sulfogene line.

It is said to be of particular interest for jig application to cotton piece goods where it produces a black equal in strength, intermediate in shade and brighter than either Sulfogene Carbon HCF Grains or Sulfogene Carbon MCF Grains.

Similar to other dyes in the same class, Sulfogene Carbon T exhibits generally good fastness to light and washing, it is reported.

* Registered trade-mark

SUPRALAN* RED NB

(General Dyestuff)

A new, water-soluble metalized dyestuff, which is claimed to be applicable with good levelness and exhaustion on wool from a nearly neutral dyebath. It is said to give superior fastness properties on wool, the fastness to light, washing, fulling, carbonizing, steaming, perspiration, and water all being very good to excellent. It is therefore recommended by GDC for use on knit goods that are to be shrink-proofed, and it is especially suitable for certain styles of fabrics for which the long boiling necessary for chrome colors impairs the texture and quality of the wool more than is desirable. It is also claimed to dye spun nylon in nylon-wool blends because it is free from the blocking effect of free sulfonic acid groups, but is not recommended for filament nylon because it dyes barré. Acetate and rayon effects are said to be left clean in dyeing. The fastness properties on nylon are reported to be quite good, that is, very good to excellent to light, and excellent to rubbing, perspiration, sublimation, 0.1%-active chlorine, and Wash Test III. Moderate solubility is said to preclude use of this product for continuous dyeing.

* Registered trade-mark

TINON CHLORINE* BLACK DRB PASTE

(Geigy)

A vat black said to possess excellent dispersion properties and to be well suited for pad or package dyeing, this new dyestuff reportedly offers better fastness than the usual run of direct dyeing vat blacks with ratings of 4-5 to chlorine and 5 to washing.

* Registered trade-mark

TINON CHLORINE* BLUE B PASTE

(Geigy)

A bright reddish vat blue recommended by Geigy for shirting, dress goods, upholstery and yarns, this new color is reported suitable for application by the reduced dyeing method pigment pad-jig reduced or package dyeing. The light fastness is said to be very good, rating 8 in medium and heavy shades.

* Registered trade-mark

TINON CHLORINE* GREY LNR PASTE

(Geigy)

A reddish shade of grey, this new vat color is designed for application by the continuous dyeing method. Geigy states that good light fastness with characteristic vat color wet fastness enable it to be recommended for draperies, dress goods and work clothing.

* Registered trade-mark

TINON CHLORINE* RED RK DOUBLE PASTE

(Geigy)

With exceptionally good light fastness reported (rating 7-8), this yellowish vat red is expected to find wide application on dress goods, curtains and upholstery cloths. A slow-exhausting dyestuff with good dispersion, the color is said to produce unusually level results.

* Registered trade-mark

TINON CHLORINE* RUBINE R PASTE

(Geigy)

A deep bluish red which is said to possess all-around good fastness, this new dyestuff with its reported excellent dispersion is claimed to be well suited for use as a self shade or as a shading element for upholstery fabrics and on yarns for embroidering and woven fabrics. Reportedly having extremely good build up, it is said to be well adapted for the production of heavy shades.

* Registered trade-mark

TINOPAL* 4BMA

(Geigy)

A textile whitening agent for cellulosic fibers and fabrics in the form of yarns, knit goods and woven materials. It is stated that it is especially adapted for use where the applic.tion calls for low temperature and a minimum of salt although it is equally effective in the higher temperature ranges.

* Trade-mark registered

TINOPAL* RBNA (Patented)

(Geigy)

An optical whitening agent particularly recommended by the manufacturers for nylon and also suitable for cotton and rayons. In nylon application it is said to have the unusual feature of drawing and exhausting well over a wide pH range. It may be applied with equal effect in a highly alkaline scouring bath or as an acid color with sulfuric. The rate of drawing and exhaust is controlled by temperature. Incorporation in either a Textone or peracetic acid bleach bath is also recommended—when so used the processing time can be cut down appreciably. For cottons and rayons it is recommended for those mills desiring to incorporate the whitening agent in a chlorine bleach bath. It is claimed that, almost without exception, the other brighteners on the market recommended for cotton and rayon lose effectiveness when even traces of chlorine are present in the application bath.

* Trade-mark registered

TRISULFON YELLOW 5GS CONC

(Sandoz)

This is reported to be the greenest of the stilbene types in Sandoz' line. Its prime use is in the paper trade, where it is said to be of importance because of its excellent fastness to alkali and good yield at low cost. It is claimed that, by combining with the redder Trisulfon Yellow GF Extra, most any shade of yellow can be produced.

VAT PRINTING BROWN HRR ULTRAFIX PASTE
(Patented)

(Progressive)

A new modified anthraquinone-type vat brown which is said to possess high affinity for cotton. It reportedly re-oxidizes very quickly and therefore does not flush into the white. It is said to be much faster to light than thioindigos of similar shade and reportedly does not tender cotton during prolonged exposure to light. It is claimed that its fastness to washing and chlorine is excellent.

VAT SCARLET H4G ULTRAFIX PASTE

(Patented)
(Progressive)

A new modified anthraquinone-type vat scarlet which is said to possess high affinity for cotton. Its quick re-oxidation reportedly prevents bleeding into the white, and its fastness to light, washing and chlorine is reported to be excellent. It does not tender cotton during prolonged exposure to light, it is claimed, and it is said to be very economical alone and in combination with regular vat pink brands.

UVITEX TXS CONC

(Ciba)

This product is said to be a highly effective, water-soluble optical bleaching agent for the whitening of cotton and rayon. A brilliant neutral whitening effect is produced. The product reportedly features a great affinity for cellulosic fibers, and its high strength together with this substantivity is said to make it possible to obtain excellent whitening with only small amounts of the brightener. Uvitex TXS Conc may be applied by exhaustion or by padding. It reportedly is compatible with most neutral or alkaline materials but its effects are decreased by acid conditions.

UVITEX U

(Ciba)

A new water-soluble optical brightener primarily of interest for use on Dacron and Orlon. It is particularly interesting on Dacron, since it is claimed that no other product on the market can equal the optical brightening effects of Uvitex U on polyester fibers.

These whitening effects reportedly show relatively good fastness to light, good fastness to washing and chlorine, and good resistance to heat (as in thermosetting).

Its effectiveness on other fibers is said to make it uniquely interesting for blends of Dacron or Orlon with other fibers.

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CHEMICALS

ACCELL O

(Maher)

An accelerator to "drive" dyes onto Orlon and other hard-to-dye syntnetic yarns, Accell O comes as a light-colored powder, making it easy to handle.

ACRYSOL G-110

(Rohm & Haas)

An aqueous solution of an ammonium polyacrylate. A synthetic thickening agent, particularly recommended by the manufacturers for butadiene-styrene latices. It is also used to improve adhesion of starch warp sizes.

AEROTEX* ACCELERATOR 5

(Cyanamid-Resin)

A catalyst for Aerotex Water Repellent 5. It is an exceptionally efficient catalyst for silicone water repellents in general and particularly Aerotex Water Repellent 5. It is a thin, stable cream which is easily diluted with water to form an exceedingly fine dispersion.

* Trade-mark

AEROTEX* RESIN 803

(Cyanamid-Resin)

This product is used primarily as a stiffening resin for all fibers. It gives a stiff, wrinkle-resistant finish to rayon, cotton and nylon. It is said to have exceptional stability both as a product and in the pad bath.

* Trade-mark

AEROTEX* RESIN MW

(Cyanamid-Resin)

A modified melamine-formaldehyde resin which shows greatly improved resistance to yellowing due to chlorine retention. Aerotex Resin MW treated fabric loses little or no strength due to chlorine washing and scorching. Finishes produced by the use of Aerotex Resin MW have the same high wrinkle recovery and excellent durability to repeated washes as other melamine-formaldehyde resins.

* Trade-mark

AEROTEX* RESIN UM

(Cyanamid-Resin)

This product is a white, free flowing, powdered melamine-formaldehyde resin. It is stated that it provides a soft finish to cotton and rayon fabric with high wrinkle recovery and excellent durability to repeated washes. It is also used for mechanically finishing cotton fabric.

* Trade-mark

AEROTEX* SYRUP 55

(Cyanamid-Resin)

This product is a modified urea-formaldehyde resin used to impart durable stiffness and body to rayon and cotton fabrics. Its primary use is as an auxiliary resin for this purpose in conjunction with melamine-formaldehyde resins or other urea formaldehyde resins.

* Trade-mark

AEROTEX* THICKENER 37

(Cyanamid-Resin)

This product is a water-soluble polymer which is used as a thickener and as an additive to warp sizes. It is a thickener for rubber latices. As a size additive, it increases the abrasion resistance of warp yarns and also improves the flexibility of the sized yarn and the adhesion of the size to the yarn. Aerotex Thickener 37 provides lubrication to the sized yarn. This product is not hygroscopic.

* Trade-mark

AEROTEX* WATER REPELLENT 5

(Cyanamid-Resin)

This product is a silicone emulsion designed to provide a durable water repellent finish for all types of fibers. The emulsion is said to be exceptionally stable and to have excellent running properties.

* Trade-mark

AHCOWET* SDS

(Arnold, Hoffman)

A 65% solution of a sulfonated alkyl ester which is said to possess very powerful wetting and rewetting properties. Its textile uses include: dispersant for pigment padding of vat dyes, pretreatment for goods to be printed, finish for absorbent toweling, wetting agent for compressive shrinking. Ahcowet SDS forms clear, stable solutions with many organic solvents. It is miscible with kerosene and forms stable emulsions with kerosene and water.

* Trade-mark

"ALKANOL"* HC SURFACE ACTIVE AGENT

(Du Pont)

A nonionic product especially recommended by the manufacturers for promoting the level application of disperse dyes to "Dacron"* polyester fiber in light to medium shades. The use of 0.5 g/l is suggested when dyeing 100% "Dacron" while 0.25 g/l is satisfactory for blends of wool and "Dacron." "Alkanol" HC is also suitable as a substitute for "Capracyl"* Leveling Salt in the application of "Capracyl" and "Sevron"** dyes to blends of wool and "Orlon"* type 42 acrylic fiber. One per cent on weight of goods is recommended. The product is said to exhibit excellent detergent properties and is a moderately good wetting agent at elevated temperatures.

* Registered Trade-mark
** Trade-mark

ALPHASOLVE LIQUID T-47

(Amalgamated)

A powerful sequestering agent in liquid form used in conjunction with Nionine NNX for the one-bath scouring and dyeing of Orlon. Clear, even shades are said to result from the use of this method, with a maximum saving of time, steam and labor.

AMAQUEST* I, II, III, IV

(American Aniline)

A group of highly versatile sequestering agents of interest not only to the wet processing industry but also to many unrelated fields where heavy metal ion contamination has introduced a problem. The four items listed above are equally versatile but vary one from the other in chemical composition and election of a particular product depends on the specific operation involved.

* T M Regis Pending

AMPITOL VAC

(Dexter)

A new non-yellowing cationic softener, claimed to be highly effective in the Avcoset process on rayons and rayon blends. Said to give a soft hand with improved breaking strength and sewability when 1 to 3% are added to the Avcoset mix. Said to disperse readily in the mix without precipitating out any of the ingredients. Exhibits high anti-static characteristics when used as a straight finish on nylon, Orlon, Dacron, Dynel and other synthetic fibers. May be applied either by exhaustion method or by padding.

ANTHRAPOLE DW

(Arkansas)

A carrier or dyeing assistant for Dacron-Wool blend piece goods, all-Dacron piece goods, and all-Dacron stock, using a one-bath method. It is said to produce excellent color value with good fastness to wet and dry crocking, and does not effect adversely the fastness to light. It is also said to be resistant to dry cleaning from the standpoint of color bleeding into the solvent. The use of Anthrapole DW in a one-bath process for dyeing Dacron-Wool blend fabrics, is said to permit the total time of dyeing to be considerably shortened as compared with two-bath methods. Also, the fact that Anthrapole DW may be used successfully on conventional mill equipment, eliminates the necessity for pressure dyeing machines. In connection with this process, the use of Dispersinol C is recommended by the manufacturer for thorough dispersion of the Dacron dyes before their addition to the bath. In most cases, 18% to 20% of Anthrapole DW, on the weight of fabric, is required for optimum results. Anthrapole DW is anionic in nature and is slightly alkaline in reaction having a pH in the range of 8.5. It disperses readily in water to give an emulsion of fine particle size which is said to be stable under the conditions of dyeing.

ANTI-BLOCK QP

(Colloids)

A new, synthetic, anti-blocking agent to eliminate takiness or blocking tendencies in polyvinyl acetate or similar resin formulations. It is stated that it will prevent all types of finishes from sticking on cans or frames. Resistant to high temperatures and non-ionic in nature, it is said to demonstrate excellent compatibility in all types of processes.

ANTIFUME AC

(Antara)

A new durable gas fading inhibitor for acetate rayon and Arnel** fabrics and yarns. It is applied in either high or low temperature dyebaths without oiling out or forming a scum on the surface of the dye liquor. Antifume AC is said to cause a minimum of shade change on the dyed fiber and to be resistant to yellowing on exposure to atmospheric gases.

** Trade name of Celanese Corporation of America for cellulose triacetate fiber.

ANTISTAT

(Foncourt)

An organic polyoxyethylene alkyl amino compound claimed to be very effective in eliminating the formation of static charges during the processing of synthetic fibers. This product is soluble in water, and is said to be applied with the conventional mill equipment.

APPRAMINE* 355

(Warwick)

A new water-soluble cationic fatty amide softener. This product is said to give an excellent soft hand to cotton, rayon, rayon and acetate, rayon and nylon, and other rayon blended fabrics. Appramine 355 may be used in conjunction with most synthetic resin finishes on dress goods and suitings. Does not discolor whites.

* Registered Trade-mark

ARKO FINISH NT

(Arkansas)

Primarily a lubricating softener for cotton and rayon fabrics where good sewability and minimum needle cutting are required. It is said to be highly resistant to yellowing and to rancidity development, and has excellent anti-static properties. For most applications, 4% to 5%, on the volume of the bath, is recommended by the manufacturers. It is a stable white emulsion and is chiefly nonionic in character. It disperses readily in warm water and has a pH range of 9.4 to 9.6. Preferably it is used alone but hygroscopic softeners, such as Arkola G, may be combined with it if desired.

AULABRITE® BINDER 738

(Aula)

A combination of polyamide resins and stabilized elastomer for use with Aulabrite Color Concentrates in printing and pad dyeing. This new binder is said to produce low wet and dry crock and excellent wash fastness and is stabilized to give excellent running properties in printing.

AULABRITE® BRONZE ASSISTANT 269

(Aula)

A wetting agent which is used to paste out metallic powders before same are added to Aulabrite Metallic Binder 888C.

AULABRITE® EMULSIFIER SPA

(Aula)

A combination of emulsifiers and dispersing agents to be used in the preparation of Aulabrite starch base extender clears of the 180 Series.

AULABRITE® EXTENDER CONCENTRATE 780

(Aula)

A new extender concentrate containing a special combination of self-catylizing thermosetting and thermoplastic resins. This product is used in the preparation of Hand Rub Washfast Extender 926 and is also required as an additive to the print paste when the Hand Rub Washfast System is used.

AULABRITE® EXTENDER CONCENTRATE 793

(Aula)

A self-emulsifying resin solution containing surface-active agents which is required in the preparation of Aulabrite extender clears to secure resistance to washing and dry cleaning.

AULABRITE® HAND RUB WASHFAST EXTENDER 926

(Aula)

A new extender clear for use with Aulabrite series 3000 or series 7000 color concentrate to produce prints which are said to possess the highest resistance to wet abrasion such as is encountered in severe hand laundering.

AULABRITE® METALLIC BINDER 888C

(Aula)

An improved bronze binder which when used in conjunction with Aulabrite Bronze Assistant 269 will produce metallic prints said to possess exceptional resistance to washing, dry cleaning, crocking, and after processing such as required when co-printed with dyestuffs.

AULABRITE® SERIES 180 STARCH BASE EXTENDER CLEARS

(Aula)

A new line of extender clears based on starch. These extenders are said to develop substantially increased color value as compared to presently used water system extenders. It is stated that they have excellent resistance to washing and dry cleaning, show good crush-resistance, and produce prints which can be successfully friction calendered. Discharge printing with Aulabrite water phase pigments can be done with extenders in this series.

"AVITONE"* SR SOFTENER

(Du Pont)

Applied to cotton it is said to leave a desirable softness of hand, impart surface lubrication and improve draping qualities on both woven and knitted fabrics. In addition, it is said to give the fabric the necessary absorbancy for proper shrinkage control and lubricate fibers and yarns for satisfactory performance during high-speed sewing. "Avitone" SR can be used as an individual finish or it can be combined with "Elvacet"* 81-900 polyvinyl acetate emulsion, starches, gums or weighing agents. Pad baths containing the product are said to exhibit increased penetrating power and, consequently, do not require an auxiliary penetrant. Formulas containing "Avitone" SR eliminate the necessity for adding an auxiliary rewetting agent when a "Sanforize" finish is desired. Chemically, "Avitone" SR is primarily an anionic, hydrocarbon sodium sulfonate. Physically, it is a light tan, soft paste. The pH of a 1.0% dispersion in water is in the range of 7.5 to 9.0.

* Registered Trade-mark

AVOLON

(Tanatex)

A new type carrier for dyeing DuPont's Dacron polyester and Celanese's Arnel triacetate fibers. Avolon is said to give better color values and to allow adds of dyestuff in prolonged dyeing cycles. The product has no appreciable effect on lightfastness nor does it affect rayon acetate. Due to uncomplicated application procedure, spotting and turring danger is absent. It is claimed that Avolon gives results comparable to those of phenolic carriers without any of their drawbacks.

BELLEFIX CN and BELLEFIX VS

(Belle)

Clear viscous solution of resinous condensation products for aftertreatment of direct colors on cotton and viscose to improve wash fastness. They can be employed as straight fixatives or in conjunction with urea formaldehyde resin, and can be used on practically all dyeing and finishing machines.

BELLEFIX N-100

(Belle)

A cationic fixing agent for aftertreatment of selected colors on nylon to obtain extreme fastness to washings. In all cases, dyeings are claimed to easily withstand the AATCC No. 3 wash test, and in a majority of cases will withstand the AATCC No. 4 wash test.

BERAPON S-60

(Berkshire Corp)

A complex fatty amido compound in the form of a white creamy paste which has a pH of 6.5-7.5 in 1% solution at 80° F. Its aqueous solutions are said to be resistant to hard water and to be unaffected by acid or alkali in concentrations usually encountered. Suggested uses are: softener for dyed or bleached yarns to facilitate winding and knitting qualities; lubricant for wool tops; softening dyed piece goods, hosiery and yarns; softening of prints; selected one-bath dyeing and softening operations; combination softening and brightening; mangle finishing purposes either alone or in combination with starches, fillers, oils, etc; softener applied in combination with thermoplastic and thermosetting resins; for synthetic and mixed fiber softening purposes.

BERKOPON LD-52

(Berkshire Corp)

An anionic synthetic detergent and solvent said to possess excellent wetting, pentrating, emulsifying and dispersing properties. It is said to be resistant to variations in pH and common mineral salts usually found in hard water. Features are claimed to be: used to scour fabrics free of impurities such as oil, grease, graphite, sizing, natural waxes and gums; free rinsing and minimizes yellowish or grayish cast due to unrinsed soap or alkali; produces soft and lofty fabrics by removal of soap, soil and all traces of processing chemicals.

BONDREZ 501

(Stein, Hall)

A waterphase printing binder for metallic powders used chiefly in the textile industry for machine roller printing. It can be printed along with vats, leuco vat esters, insoluble azos and pigment colors. It is a milky-white emulsion of the oil-in-water type and belongs to that class of synthetic latices which is very stable to light and atmospheric changes. It is said to offer these advantages or savings: exceptionally fast to washing and dry cleaning properties; added abrasion resistance; requires no catalyst; fast drying.

BRADSOL OR

(Bradford Soap)

A product designed for use in textile finishing operations where the removal of oil and grease is desired. When used on synthetic fabrics it is said to be particularly effective. It is claimed that it has an amazing ability to remove oil and rust stains in the same operations without the use of oxalic acid or similar chemicals. When used on nylon lace, it readily facilitates the removal of troublesome graphite.

BRADSYN J SOFTENER

(Bradford Soap)

A substantive, cationic softener designed for use in textile finishing operations where improved tear strength, better abrasion resistance and improved sensability are desired along with a pleasing hand. It is said to have excellent resistance to scorching, yellowing and water spotting. It is further said to be compatible with most resins, starches, gums and other finishing agents; therefore can be incorporated directly in a bath containing other finishing agents or applied by itself after resin finishing. It is stated that Bradsyn J Softener has good wash resistance, dry cleaning resistance and antistatic properties.

BRADSYN LINING SOFTENER

(Bradford Soap)

Bradsyn Lining Softener was developed primarily for finishing synthetic piece goods. The requirements governing the development of this product were a desire to impart a silky smoothness and full bodied drape to the fabric without affecting color values or wearing qualities, a desire for a product with good stability on aging against discolor, deterioration and odor, and a need for a product easily applied at low costs to give a quality finish.

BRADSYN N SOFTENER

(Bradford Soap)

A nonionic finishing agent compatible with most chemicals used in textile finishing operations. It is said to have excellent resistance to scorching, yellowing and water spotting, and to have a negligible effect on dye shades. Bradsyn N Softener is quickly and most easily dissolved by mixing with about 5 times its weight of warm water, then diluting to strength. When used with other finishing agents, dissolve these per manufacturer's recommendations, then add Bradsyn N Softener as diluted above to mixing tank and dilute entire tank to strength.

BRADSYN PLASTICIZER A-2

(Bradford Soap)

A product which dissolves readily in water. It is intended for use in many textile finishing operations and especially in resin finishes where it plasticizes the action of the resin and gives improved tear strength. It, at the same time, is said to show excellent resistance to yellowing and water spotting. It is said to find many uses on natural and synthetic fibers to improve hand, reduce soil pick-up, reduce static, etc and plasticize harshening effects of other finishing agents. Aids many mechanical operations such as in napping of cotton fabrics and calendering.

BRADSYN SOFTENER S

(Bradford Soap)

Bradsyn Softener S was developed primarily as a softening agent to be used in finishing fine cotton fabrics. Primary considerations in the development of this product were requirements that it must not yellow the goods on aging, must have excellent resistance to scorching and water spotting, must impart a desirable luster and provide inter-fiber lubrication to give a pleasing hand to the finished goods. Finally the product had to meet the above requirements by application in normal processing operations at an economical cost.

BRADTONE B

(Bradford Soap)

A substantive cationic compound designed to aid the final finish on woolens and worsteds. Because of its cationic nature it is attracted to and adheres to the fibers forming a protective film. This film is said to resist spotting from soils, both liquid and solid, and reduce any natural static that may be developed. This film also acts as an inter-fiber lubricant which aids in increasing the tensile strength of the fibers while imparting to finished goods a pleasing hand. Further, this film acts as a lubricant for many mechanical operations which play such an important part in finishing processes. It is claimed that this product shows excellent stability on aging, excellent resistance to yellowing, water spotting and soil spotting. It, at the same time, shows good resistance to washing and dry cleaning, while improving the tear and tensile strength.

BURFEX

(Burkart-Schier)

A new anionic softener having unique combination of properties which is said to impart

soft supple hand with good absorbency. Product does not discolor whites and has excellent heat aging properties. Presents no solubility problems.

BURKOTE SPLICING AGENTS

(Burkart-Schier)

For knotless splices. Latex adhesives providing an almost instantaneous bond for natural and synthetic yarns where knots cannot be tolerated.

CALEN-AID*

(Textile Adjuncts)

A water miscible, nonionic, finishing agent that can be used as an additive to resins, gums, or other synthetic stiffening agents to produce high-luster calendered finishes. A superior finishing agent for fine textured wool and synthetic blended fabrics, when used diluted in warm water, or added to the wash water. An organic silicone-wax emulsion of fine cream consistency. Soluble in alcohols and glycols. Will not discolor nor contribute any odor to finished cloth.

* Trade-mark

CALMASENE T

(Belle)

A sequestering agent of the polyamino carboxylic acid type used as a chelating agent for hard water salts, ferrous iron and other metal ions.

CATAMINE SF

(Laural)

A substantive cationic softener readily soluble in warm water. This product may be applied to yarns, piece goods and packages. It is particularly recommended by the manufacturers for Orlon. It is stated that it adds softness to the fabric, has excellent resistance to aging and will not change the shade of dyed goods.

CEMOL C-4

(Maher)

A low-foaming detergent, based on the nonionic fatty acid esters, which is said to have excellent leveling properties.

CERALOID 356WD

(Colloids)

A water-dispersible wax containing no mineral waxes. It is used as a hot-melt in slashing of synthetics or may be added to size formulations to improve abrasion properties, lubrication of fibers and antistatic qualities. Readily removable.

CERALOID X4977D2

(Colloids)

A new non-yellowing polystyrene type softener and lubricant. It is said to improve the binding properties of starches and the sewing qualities of threads. Added prior to brushing or calendering, it promotes excellent luster, and is used as a carnauba wax replacement.

CHEELOX B-14

(Antara)

A liquid all purpose organic sequestering agent specifically designed to inactivate calcium and magnesium along with the iron often encountered with these ions. Cheelox B-14 is a balanced mixture of soluble salts of amino carboxylic acids. It is soluble and stable at all temperatures in neutral, acid and alkaline solutions. It is stated that this versatile sequestering agent is used in many textile operations such as washing, kier boiling, various color dyebaths, peroxide bleaching and fast color soaping. In alkaline textile processing, it simultaneously softens water and prevents the formation of iron stains on the fabric.

CHEL DM-41

(Geigy)

A chelating agent developed by its manufacturer for the control of calcium, magnesium, ferric and sundry other metallic ions which cause problems in textile processing. Especially recommended by the manufacturer for use in prolonged, highly alkaline mediums such as vat color applications and scouring baths.

CHEMIGUM* LATEX 236

(Goodyear)

A butadiene-acrylonitrile copolymer dispersion, small particle-size latex. Particle size is in the order of 500Å. Colloidal stabilization is due to the small particle size which gives excellent mechanical stability and low acid and salt ion tolerance. A high acrylonitrile content makes this latex especially suitable for use in products requiring maximum oil resistance and toughness. Fibrous gasketing materials and abrasive papers are two such products.

* Trade-mark

CHEMIGUM* LATEX 246

(Goodyear)

A butadiene-acrylonitrile copolymer dispersion, small particle-size latex. Particle size is in the order of 500Å. The latex has excellent mechanical stability and low acid and salt ion tolerance which allows efficent control of precipitation. A medium acrylonitrile content suggests use of the latex where inherent resistance to oils, gasolines and solvents is required. Typical processes which best utilize small particle-size latices are beater impregnation of paper and wet-end addition or off-machine saturation of paper and textiles.

* Trade-mark

COLGATE'S "LOW FOAM" DETERGENT

(Colgate)

A complete heavy duty synthetic detergent having low sudsing properties. It is stated that, since Colgate's "Low Foam" Detergent is unaffected by hard water, acids, alkalies, and metal salts, advantage may be taken of its surface active properties over a wide range of operating conditions. Optimum conditions are obtained at concentrations varying between 0.05 and 0.25%, the lower value being recommended for wetting and penetrating applications while the upper range is suggested for good detergency.

CYCLAN S

(Tanatex)

Remarkably even hydrosulfite stripping of both acid and acetate dyestuff on nylon and other fibers is said to be facilitated by Cyclan S. It is stated that no free sulfur dioxide is formed, bad odors are eliminated, and the stripping bath stays clear. Redyeing becomes easier because of complete uniformity of stripping obtained with Cyclan S.

CYCLAN W

(Tanatex)

In conjunction with hydrosulfite, Cyclan W removes acetate dyestuffs from wool. Crocking and lightfastness problems due to acetate dyestuff stains on wool are said to be eliminated with the help of Cyclan W. The white portion of color-and-white all wool goods can easily be cleared of stains with hydrosulfite and Cyclan W without injuring the wool.

DECOMINE

(Arkansas)

Primarily a dyeing assistant for Acrilan-wool blends by means of which an excellent union is said to be obtained in a one-bath process. In connection with this process, many classes of wool dyes, including the metallized types, may be used but the dyes must be selected carefully in particular reference to their satisfactory transfer properties from wool to Acrilan. In most cases, Decomine is added to the bath before the dyes, but in the case of the metallized neutral colors, particularly where dark shades are to be dyed, it is best to add the Decomine after the dyes have been practically exhausted onto the wool. Normally, 1% to 4% of Decomine, on the weight of fabric, is recommended. It is stated that the outstanding advantage of Decomine is that it produces level dyeings on Acrilan-wool blends, using conventional equipment and is claimed to be the only one-piece product which has been found to be satisfactory for this purpose. Decomine consists of a balanced combination of cationic and nonionic ingredients. It dissolves readily in water at all temperatures and remains clear at the boil under the conditions of dyeing. It is neutral in reaction having a pH range of 6.5 to 7.0. For optimum results, other dyeing assistants should not be present in the bath.

DEXENE 77

(Dexter)

An anionic softener for cotton which is said to produce a far superior hand on a money-value basis than any of the old-type softeners for cotton. This new type finish is said to produce no yellowing of finished goods, does not affect light fastness of dyes, facilitates high-speed sewing and cutting. Dexene 77 is said to be an excellent after-treatment for resin-treated goods and also can be mixed in with various resins to produce smoother hand.

DEXOLENE G, B, and MTV

(Dexter)

Three high-speed wetting agents composed of solutions of sodium dioctyl sulfosuccinate. Dexolene MTV is said to be non-foaming making it especially effective in high-speed processing where a build up of foam is undesirable. Wetting agents are said to be effective as wetting out assistants and dye levelers in package and skein dyeing of cottons, rayons and other synthetics; assistants in finishing baths to promote thorough penetration of finish, penetrants and dispersing agents for vat dyes in pigment padding; re-wetting agents for goods which are to be pre-shrunk or which are to be padded after drying. Only exceptionally small percentages are needed and the company recommends 0.025 to 0.1% on weight of goods for most operations.

DEXTROL GM-94

(Dexter)

Nonionic softener said to have no wetting or rewetting properties. Designed specifically for use with water repellents of both permanent and nonpermanent types, this finish is claimed not to affect spray rating of fabrics. Goods may be softened prior to application of the water repellent or the softener can be mixed in with the repellent. GM-94 is said to be an effective softener for rubber latex backing material and when it is mixed with rubber latices it produces a more pliable film.

DEXTROL RESEARCH SOFTENERS #20, #21, #22 and RDA

(Dexter)

Cationic softeners claimed to be non-yellowing either in high-temperature treatment or on long storage of treated goods. Effective on natural and synthetic fibers, these finishes differ only in hand they produce and pH. Applied either in the final rinse or by padding, ½ to 3% on the weight of the goods are recommended. Compatible with most resin mixes as well as with starch, dextrins, gums and similar substances. the four softeners are said to exhibit high anti-static characteristics.

DISPERSINOL C

(Arkansas)

A highly effective dispersing agent for dyes, which is particularly recommended by the manufacturers in connection with dyeing Dacron. It is stated that it also has excellent leveling and retarding properties for use in union dyeings, such as Dacron-wool blends. In most applications where disperse dyes are to be used, 1% to 4% of Dispersinol C, on the weight of fabric, is recommended, the lower amount for light shades with increasing amounts in proportion to the depth of the shade to be dyed. It is claimed that it has been found superior to most other dispersing agents both from the standpoint of rapid action and uniform dispersion of the dyes. Dispersinol C is anionic in nature, and is slightly acid in reaction. It dissolves readily in water at all temperatures to produce a clear solution. Dispersinol C can be used with other anionic and nonionic products, but is not compatible with cationic agents.

DRUKEEL B

(Drew)

A versatile product possessing strong calcium and iron sequestration.

DRUSIL 30

(Drew)

A durable silicone water repellent which is said to possess superb fastness to drycleaning and washing. May be used in conjunction with thermo-setting resins for crush resistance, shrinkage control and mechanical finishes.

DRUSIL W

(Drew)

A durable one-piece silicone water repellent; the catalyzing portion is built-in. Effective on woolen, worsted piece goods, felt, knitted fabric and yarn.

DRUSOL M-60

(Drew)

A wetting and re-wetting agent of high efficiency.

DRUSPIN PF

(Drew)

A super antistatic fiber lubricant. Effective in processing new synthetic fibers at low relative humidity.

DRUSPIN WLA

(Drew)

A new type antistatic wool oil which is said to possess excellent spinning properties.

DRUSPIN WOR

(Drew)

An antistatic fiber lubricant for processing wool, Dacron, viscose, nylon on the Pacific Converter, pin drafters, etc.

DRUTERGE NT

(Drew)

Said to possess proven emulsifying, dispersing, suspending and wetting properties—a superior textile detergent, a low sudser. Useful in kier boiling, continuous bleaching, soaping off vats and napthols, print washing. Useful as a Varsol emulsifier.

"DUPONOL"* WAQA SURFACE ACTIVE AGENT

(Du Pont)

An aqueous solution of commercial sodium lauryl sulfate especially developed to meet the exacting requirements of modern liquid cream lotion shampoo formulations. It can also be used to advantage in any of the applications where conventional aqueous sodium lauryl sulfate is employed. Because of its high quality and non-toxic properties, "Duponol" WAQA is said to be an ideal emulsifier for cosmetic and externally used pharmaceuticals. "Duponol" WAQA is characterized by its lightness of color, color stability and uniform viscosity from lot to lot.

* Registered Trade-mark

DYLON PENETRATOR

(Maher)

A non-foaming pentrating and levelling agent especially designed for use on nylon fibers.

ECCOCLEAN RPW

(Eastern)

A 100% active self emulsifiable roller and screen cleaner. Eccoclean RPW can be used as is or in water dilution to form stable emulsions. Recommended by the manufacturers as an outstanding cleaner for silk screens, rollers and blankets. Samples sent on request.

ECCO DEFOAMER PD

(Eastern)

A stable thin paste containing a synergistic combination of silicone and other defoamers. Easily dispersible in water at any temperature. Recommended by the manufacturers for use in all textile operations, and particularly for the defoaming of latex emulsions during padding or printing. Samples on request.

ECCO DEFOAMER PL

(Eastern)

A water thin practically odorless emulsion easily dispersible in water during use. Recommended by the manufacturers for all textile operations, particularly for those in which an odorless defoamer is required. Samples on request.

ECCOSYN

(Eastern)

An improved fulling agent for wool, compatible with alkalies normally used in processing, and said to possess good detergent and emulsifying properties. This low cost product will not salt out on addition of alkalies or alkali carbonates, and provides the necessary solution viscosity for optimum fulling. Samples on request.

ECCOWET LF

(Eastern)

A low-foaming wetting agent stable in both acid and alkaline dyeing and finishing baths. Particularly recommended by the manufacturers for wool dyeing or other operations on which foaming is a troublesome factor. Samples on request.

ELKALINE* MKF

(Sandoz)

A nonionic waxy compound used as a leveling agent for dyeing of wool and silk in a weakly acid bath with metal complex colors of the Lanasyn type.

* Registered Trade-mark

EMKA FINISHING OIL BM

(Emkay)

A lubricating and softening agent. It is used in the finishing bath and is a sulfonated olive oil.

EMKAFIX SA

(Emkay)

A new type cationic resin fixative. It is claimed to be a very efficient after-treatment for direct, develops, sulfurs, etc. Little change in shade and light fastness is caused, and it completely prevents migration of color and staining. Emkafix SA is a clear amber colored solution, stable to normal storage conditions. It is compatible with Glauber's salt and sulfuric acid. With its application, certain colors may be improved to pass No. 3 wash test.

EMKAPON KM

(Emkay)

A highly efficient low foaming dye dispersant. It is a blend containing sulfated fatty alcohols. It is recommended by the manufacturers as a dyeing assistant for package dyeing, vats, and skeins to give greater uniformity of shade.

EMKARON OS

(Emkay)

A newly developed stabilizer for use in bleaching with sodium chlorite. It is said to control the development of chlorine dioxide and protect against corrosion and offensive odor formation. It is stated that Emkaron OS is completely soluble in water, is nontoxic, and is recommended for use in the bleaching of Dacron, nylon, Orlon, and cotton yarns.

EMKATAN G

(Emkay)

A substantive anionic softener which is said to give a highly desirable hand with minimum tendency for yellowing under a high heat.

EMKATEX VA

(Emkay)

An effective ethylene oxide condensate, penetrant, wetting agent, and detergent which is particularly applicable for producing a clean dye bath in the vat dyeing process.

EMULSIFIER P

(Keene)

This product is said to enable pine oil to give a stable emulsion in aqueous solutions.

EPSOTEX A

(Laurel)

This product is recommended by the manufacturers as a softener with exceptional stability to high strength Epsom salt solutions and is used in the finishing of cotton piece goods. It gives a desired hand and eliminates the harshness of the weighting finish.

ESTERSULF

(Maher)

This is an alkylarylsulphoamino ester which is said to be an exceptional emulsifying agent for a wide range of solvents and waxes. Anhydrous, it makes an excellent base for drycleaning soaps, cutting oils, etc.

ESTOL EXTRA

(Drew)

A premium quality sulfonated tallow produced to exacting specifications which is particularly recommended by the manufacturers for white goods in cotton finishing.

ETERNALURE D-38

(Onyx)

A modified vinyl type polymer emulsion for use as a textile size and finish of good durability and hand for piece goods. It is said to feature high resistance to buildup on rolls, cans and clips during processing and drying. It is an effective nylon hosiery finish and snag reducer.

ETHOPAL

(Maher)

Concentrated fatty acid esters, resistant to acids and alkalies, these products are generally recommended by the manufacturers for use on acid-carbonized material, and in acid fulling of wool.

EVENATE POWDER XX

(Amalgamated)

This product offers the advantage of a one-bath system for the scouring and dyeing of nylon hosiery made possible by the use of a single compound. Not only is there a great saving of time and labor but there is also the marked advantage of the use of only one product. Clean, evenly dyeing hosiery with excellent union is said to be the result of using Evenate Powder XX.

EXSOL

(Foncourt)

A new type of soil, grease, and graphite remover said to be particularly effective on the newer type synthetics, and equally useful for cotton, rayon, and woolens. This product, it is stated, is a blend of polyethylene-propylene ethers coupled with mutual solvents which unites with, disperses, and emulsifies greasy and graphite type soil.

FABRIPEL* — WATER REPELLENT

(Fabric Chemicals)

A zirconium acetate water repellent formulated to give maximum durable water repellency by a one-bath process on all types of goods, including acetates, mixtures, nylon, and other synthetics, and said to give an excellent hand and finish. It is stated that Fabripel is an extremely stable emulsion and does not require the addition of protective colloids to insure stability. This stability makes possible much greater versatility in finishing operations.

* Trade-mark

FANCOSOL P

(Fancourt)

An amphoteric quaternary ammonium compound claimed to be effective as a dye assistant for all acetate, acid, or basic dyestuffs. It is stated that this product, when used in small amounts is an excellent dye assistant, and when used in larger amounts will reduce the shade of overdyed acetate and nylon fabrics from 10 to 50%.

FELANOL POWDER

(Fooley)

A mildly alkaline powder type detergent of the sulfated amide type built with complex phosphates to give highest efficiency and rinsability.

FELCOFIX O

(Fooley)

An efficient aftertreatment for directs, develops, and sulfurs to improve wash fastness. It is mildly cationic and has little effect on shade and brightness. Particularly useful where odor is a problem as there is no residual odor from its use.

FELCOLAN GL

(Fooley)

A new and highly efficient softener and lubricant especially designed for use on nylon and especially on Helanca hosiery. The product is slightly cationic in nature and contains lanolin in very efficient dispersible form. Improves knitting quality of the Helanca yarn.

FELCOLLOID W

(Fooley)

A protective colloid for use in processing wool and silk. Hinders the action of sulfides and other alkalies and also protects wool during chrome dyeing leaving the fiber fuller and softer.

FELCOMINE SX

(Fooley)

A special combination of anionic and nonionic wetting agents developed to give most efficient wetting under very low foaming conditions.

FELCO RETARDER V

(Fooley)

A complex lignin type material useful as a leveling agent in vat dyeing especially.

FELSYN MS

(Fooley)

Dacron dyeing assistant based on methyl salicylate and compounded with emulsifiers to make a very fine particle size emulsion in the dyebath.

FIBACON 325

(Burkart-Schier)

An amphoteric softener concentrate, 100% active, easily dispersible in hot water. It is said to impart a soft pleasing hand — also a high degree of fiber lubricity. Has antistatic properties. Product is moderately hard wax-like solid Non-yellowing and develops no objectionable odors on aging.

FOAMICIDE SB1B

(Colloids)

A new and more concentrated form of defoamer made on a new nonionic system. It is claimed to be nontoxic, very economical and effective in all types of resins (water solutions or solvent systems) as well as latex, polyvinyl acetates, pigments and printing pastes for sizing, dyeing and finishing operations. Will not interfere with viscosity or adhesion nor with dyeing, finishing or printing processes.

FULTEX A

(Fancourt)

A new type of complex fatty amino amphoteric compound said to be useful in the fulling of woolen fabrics. It is claimed that this product shortens the time required for fulling, and leaves the wool soft. Because of the softening effect of Fultex A, a large percentage of reprocessed wool can be used to lower costs. It is reported that this product is not affected by water hardness, and readily rinses from the fabric.

HI FOAM BASE LL

(Maher)

An anhydrous fatty acid amide with sulfonated alkyl aryl, producing a neutral base with exceptionally high sudsing properties. It is usually used in 40% to 60% strength, or to compound other products where its high foaming properties make it desirable for a wide range of products, including upholstery cleaners, rug shampoos and dishwashing and bubble bath compounds.

HYDRO-PRUF AB

(Arkansas)

A one-piece water repellent of the silicone type which may be used on a wide variety of textile fabrics, to impart a durable water repellent and stain resistant finish. It is particularly suitable for application to woolen fabrics due to the fact that high curing temperatures are not required. For application to fabrics made from wool and other animal fibers, ordinary drying temperatures in the range of 240° to 260° F have been found to be adequate for optimum results, provided that the time of drying is at least five minutes. The finish thus produced is said to be durable both to mild laundering and to dry cleaning. For pad or quetsch application, 5% to 7% of Hydro-Pruf AB, based on the bath volume, usually gives satisfactory results. For dyebeck or washer application, 8% to 10% of Hydro-Pruf AB, based on the weight of fabric and run in a short bath for 30 to 45 minutes at room temperature, is recommended. Hydro-Pruf AB is a milky emulsion said to be of excellent stability which is readily dispersible in water at room temperature. It is acid in reaction having a pH range of 4.0 to 4.2. Hydro-Pruf AB is normally used alone in the bath, and the addition of external catalysts or other finishing agents is neither necessary nor desirable.

IGEPAL* DM-710

(Antara)

A 100% active nonionic surfactant recommended as a powerful detergent for animal, cellulosic and synthetic fibers. Its applications include raw wool scouring, print washing, fast color soaping and dyeing assistant. Igepal DM-710 is a higher alkylphenoxy polyoxyethylene ethanol, in liquid form, which is stable in boiling water and is unaffected by acids, alkalies and metal ions.

* Registered Trade-mark

JUVENON* SOIL RETARDANT R

(Cyanamid-Resin)

A soil retardant composition for application to rugs, pile fabrics, flat fabrics and other surfaces to reduce the rate of soiling. Juvenon Soil Retardant R has little or no effect on the hand or light fastness of dyes. It is an effective soil retardant which can be applied by padding, spraying, exhaustion, and other methods commonly used in textile and carpet mills.

* Trade-mark of Alexander Smith, Inc

KILASTAT

(Maher)

Based on a cationic finish, this product was developed for use on a wide range of fibers, such as nylon, rayon, cotton, and wool, to prevent static. It is said to disperse readily, exhaust cleanly, and leave the material soft and flurfy as well as anti-static.

LANALURE

(Onyx)

This lanolin-containing emulsion is claimed to be an exceptional hosiery finish, easily compatible with resin and duller finishes. Hosiery, following a usual wash, still exhibits a smooth soft touch, demonstrating the marked durability of the product. It does not build-up on equipment, serving as a release agent for hosiery from hosiery forms.

LANASEAL

(Fancourt)

A water-soluble emulsion containing lanolin and waxes, said to be used as a softener and lubricant for hosiery. It is claimed that this product is particularly useful for full fashion and seamless nylon hose, and is compatible with other hosiery finishes; also that a weighty softness along with lubrication is imparted which gives good boarding and pairing properties.

LAVEPON WS-1

(Rohm & Haas)

A nonionic surfactant, said to be outstanding for raw wool scouring in neutral or alkaline systems; also for wool piece goods, top, and skeins. WS-1 is said to produce fiber with superior color and physical properties.

LEUCOPHOR* BS LIQUID

(Sandoz)

A liquid optical brightening agent, especially developed for application on cellulosic fibers. It is stated that it is stable to peroxide and produces a brilliant white with excellent washfastness.

Registered Trade-mark

LEVELTEX EA CONC

(Maher)

Developed particularly for levelling difficult-to-dye colors on tippy wool and pulled wool, about 2%, based on the weight of the wool, should be added first to the dyebath, and permitted to run for five minutes prior to adding the disperse dyestuffs. This is said to tend to penetrate the wool first and let the dyes go on evenly.

LIPAL 4L

(Drew)

A nonionic, water soluble, polyoxyethylene laurate which is said to be a low foaming, surface active detergent, emulsifier and wetting agent. Also an outstanding emulsifier and dispersing agent for waxes.

LUXOLENE S

(Drew)

A self-emulsifiable glyceryl trioleate for spinning fine even yarns on the woolen system. It is said to exhibit antistatic properties. For cashmere, lambs wool, intended for fine quality knitted sweaters.

LYOGEN* DF

(Sandoz)

A leveling agent for dyeing with direct colors. Lyogen DF retards the initial too rapid rate of exhaustion and promotes migration at the boil.

Registered Trade-mark

MACCOWAX SOFTENER

(Mac)

Generally used on tubular knit fabrics in the Tube-Tex machine to give additional body and finish to the fabric. It also can be used to equal advantage on piece goods of both natural and syntnetic fibers.

MARCANON L

(Maher)

A nonionic fatty acid ester, anhydrous, and low foaming said to possess excellent leveling, scouring, and emulsifying properties. This product can also be used as a nonionic softener.

MARCO #2886

(Maher)

A brand new type of worsted oil which is claimed to produce a practically "foolproof" emulsion of highest quality, improving spinning properties of the wool. This is the finished product, but also offered is the base, Marco Worsted Oil Base, which can be cut locally with the #80 or #100 white oil to cut down freight costs, and produce a high-quality oil at competitive prices.

MARCOCIDE SOFTENER

(Maher)

A cationic finish incorporating a fungicide-bactericide agent to insure good storage of the product itself as well as of the finish after application. This is a light, creamy paste, offered as a uniform general-purpose finish that will fit most properties desired in a cationic finish, at a price reported to be much less than most competitive products.

MARCOPRIME L

(Maher)

A plasticized copolymer resin, used on leather. It can be adjusted to produce more or less tackiness to meet individual needs.

MARCO TAR REMOVER C

(Maher)

A blend of emulsified solvents. This new combination, dispersible in cold water, is claimed to offer one of the best money values on the market.

MARCOWET RW

(Maher)

A powerful re-wetting agent. Added to the last rinse water and permitted to dry into the material, it is said to effectively speed the time of re-wetting, requiring very small percentages.

MARVUS Rx

(Maher)

Based on Hi Foam Base LL, this product is a finished rug and upholstery cleansing compound. It is claimed to be about twice the strength of the average product used for this purpose, is synthetic, containing no salt crystals to dry out and cut fibers and no soap to leave a film and cloud colors. It is stable, rinses freely, leaving colors bright and clear.

MERCEROL® QW

(Sandoz)

A mercerizing assistant for use in caustic soda liquors of 32-58° Tw. Mercerol QW is free of cresylic acid. It is stated that it produces rapid wetting and gives excellent shrinkage. It is said to be low-foaming and suitable for application in plants using a caustic soda recovery system. Incorporation of a small amount of Mercerol QW in the caustic soda lye assures a softer fuller hand, higher luster and greater uniformity of mercerized cotton.

® Registered Trade-mark

METAGLO-303

(Eastern)

An improved copolymerized water-phased resin especially adapted for printing of metallics on textiles. Recommended by the manufacturers for ease of application and elimination of build-up on printing rollers. Its outstanding properties are said to be quick drying, non-dulling of metallic prints, necessitates no curing, fast to washing and dry cleaning. Samples on request.

MOLLISAN

(Onyx)

A multipurpose lubricant and softener for textile finishing featuring greatly improved tear strength and abrasion resistance when used as an additive or topping treatment for urea or melamine resin finishes. It is stated that it is effective as an anti-static agent for synthetics and enhances the sewability of resin-finished fabrics. It is a highly efficient non-yellowing full-bodied softener for cottons. It is stated to be a yarn lubricant and anti-static, a napping assistant providing lofty nap, and a product possessing excellent compatibility with all classes of finishes.

MONACID® 6-201

(Mona)

This product is a bactericide, developed for the purpose of protecting worsted yarns against mildew and bacterial attacking, during storage.

® Trade-mark

MONALIT® FPW-RP CONCENTRATE — MONALIT® FPW-RP DEHYDRATE

(Mona)

These yarn conditioning chemicals have been developed for the setting of twist in difficult yarns. Due to their composition and rapid penetration they are said to set the twist quickly without harm to yarn or bobbins. Special inhibitors serve as protection against mildew. FPW-RP also has rust protective characteristics. Dilute aqueous solutions of 0.2% are sufficient to obtain the desired results.

® Trade-mark

MONALIT® MONARC™ CONDITIONING CHEMICALS

(Mona)

A group of chemicals especially designed to give best results when used on the Monarc Yarn Conditioning Attachment for the Abbott Automatic Quiller. They enable the yarn, during the passage of the bobbins over the conditioning pads, to pick-up sufficient moisture to assure satisfactory conditioning.

® Trade-mark
Patent Pending

MONASOFT® CTH EXTRA

(Mona)

Said to be a very economical cationic cotton softener. Compatible with resin finishes.

® Trade-mark

MONAWET® FS-2 — MONAWET® SPW

(Mona)

These surface-active agents are modified dioctyl sodium sulfo succinates. They are recommended by the manufacturers for applications where, in addition to quick surface wetting, efficient and thorough penetration is required.

® Trade-mark

MULSOID 815M

(Colloids)

A new, nonionic dispersing agent, excellent for pigment colors and metallic colors, which, it is stated, is not affected by alkalies, acids or metal salts. Non-foaming and stable to high temperatures and pressures, it is said to be extremely effective as a dye-leveler, and excellent as a crock-inhibitor.

NEKAL® BX-78

(Antara)

A powerful wetting agent for use in various phases of textile processing. This powder form, anionic surfactant is stable to acid, alkali and hard water. It is said to be widely used as a wetting and dispersing agent in various phases of cotton and wool processing. It is particularly recommended by the manufacturers as a wetting and leveling agent in direct, sulfur and vat color dyeing. Nekal BX-78 is a sodium alkyl naphthalene sulfonate.

® Registered Trade-mark

NEOVADINE AL

(Ciba)

A nonfoaming type of Neovadine AN.

NEOWET X

(Royce)

An anionic surface-active agent which is water-soluble, slightly viscous, water white, and has a slight pleasant odor. A 2% solution has a pH of 7. It is stated that it is a very rapid wetting agent for general use and is particularly suitable for use in the desizing bath as it has no action on Neozymes. It is further stated that it can be used in the bleach bath as it is not affected by peroxide in which respect it is superior to Neowet; it is also good with resin finishes. In desizing liquors it is used 1 to 2 pounds per 100 gallons; in size baths, 1 pound per 100 gallons; in peroxide bleach baths, ½ to 1 pound per 100 gallons; in resin finishes, 2 pounds per 100 gallons. It is claimed that: it is effective as regards wetting from cold to boiling temperatures; it is compatible with nonionic agents and with other anionic compounds; it does not inhibit the action of enzymes; it has good wetting back properties.

NIONINE NNX

(Amalgamated)

A colorless, completely water-soluble nonionic detergent and leveling agent used in conjunction with Alphasolve Liquid T-47 for the one-bath method of scouring and dyeing Orlon. It is stated that excellent results may be obtained with tremendous saving of time, labor and steam.

NORANE® SILICONE

(Warwick)

A stable emulsion of silicone resin which is used on all types of fibers and fabrics to produce primarily a water-repellent finish. Norane Silicone also imparts spot-proof characteristics along with water repellency. Norane Silicone is used to meet specifications for silicone resin applications.

® Trade-mark registered

NOVASOFT A

(Nova)

This is a cationic softener with a pH value of 6.5 and can be used on either the acid or alkaline substantive and preserves its fastness under usual pH variations. It is stated that it will not cause yellowing of whites and does not affect the light fastness of dyestuffs.

NOXODOR

(Maher)

Used to spray on wool, etc, being held for processing, to cover undesirable odors.

NYAPON FP

(Nyanza)

An effective fulling and scouring product for woolen fabrics especially when used with soda ash or phosphates. It is a viscous liquid, chemically a modified amine condensate, and is said to be fast to lime soaps, alkalies and acids in concentrates encountered in acid fulling and dyeing. Nyapon FP is characterized by its fast and free rinsing properties, and is also recommended by the manufacturers for scouring nylon and rayon material.

ORVUS® K LIQUID

(Procter and Gamble)

A modified alkyl sulfate which is said to have exceptionally efficient detergent, sudsing and emulsifying properties. These properties and many others, along with its stability to hard water hardness, make it well suited for a great variety of textile uses. It is completely water soluble and free rinsing and forms quick stable, voluminous suds under both hot and cold water conditions.

"PANALON"® CR CONC RESIN FINISH

(DuPont)

Designed to produce crease resistant, shrink resistant and durable calender effects, including embossing, on fabrics composed principally of cellulose fibers. It has all the finish attributes of "Zeset"® S fabric stabilizer with the exception of inferior chlorine retention characteristics. "Panalon" CR Conc finishes are slightly firmer than "Zeset" S finishes and are, therefore, more resilient. Exceptionally good whites are obtainable with "Panalon" CR Conc. Chemically, "Panalon" CR Conc is a modified urea-formalde-

® Registered Trade-mark

hyde type product. Physically, it is an essentially colorless liquid with an odor of formaldehyde. The product is miscible in all proportions with cold or warm water. It is stable indefinitely to normal storage and is stable and useable for at least 24 hours after preparation in application baths containing catalyst.

"PANALON"* LD POLYMERIC DISPERSION

(DuPont)

Especially developed for use in leather finishes and shoe dressings. It is stated that films produced with this product are bright, glossy, flexible, non-tacky, have good aging properties under normal conditions and can be plated to a smooth glossy finish with little or no plating tack. "Panalon" LD can be used alone or with various neoprene latices, "Panalon" TR polymer dispersion or "Methacrol"** products to produce a variety of finishes with different properties and effects on side, split, lining, upholstery, luggage and garment leathers. Finishes can be modified further by incorporating them with natural binders. "Panalon" LD is also compatible with casein, shellac, blood and egg albumin, natural and synthetic gums, waxes, pigment pastes, sulfonated oils and with acid and direct dyes provided these are in aqueous alkaline dispersions or solutions. "Panalon" LD produces a film with a gloss and dryness similar to the one obtained from "Panalon" TR but much more elastic and softer. In this respect, it should be of particular interest as a base binder for pigments in leather finishing.

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* Registered Trade-mark
** Trade-mark

PENTEX 44

(Colloids)

A concentrated penetrant with pine oil base solubilized on a nonionic system. This is said to give it unusual stability to pressure and to acids, alkalies and other materials commonly encountered in textile processing. As it is non-scumming, it yields maximum absorbency and rinsability, brightest colors and freedom from crocking.

PERMALOID 170V20

(Colloids)

An alkali-soluble polyvinyl acetate co-polymer dispersion said to have superior stability and compatibility with other finishes, excellent water-resistance, abrasion-resistance soil-resistance. It is claimed to be more effective and economical than the emulsions or dry forms.

PERMEL* RESIN B

(Cyanamid-Resin)

A water repellent for various types of fibers. It provides a water-repellent finish that is said to have exceptional durability to both dry cleaning and laundering. Permel Resin B also is said to provide improved tear strength, abrasion resistance and sewability. Permel Resin B in combination with other thermosetting resins provides wash and wear finishes for both cotton and rayon. It is also widely used as a durable hand modifier.

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* Trade-mark

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m-PHENYLENE DIISOCYANATE

(Westvaco)

Formula: $C_6H_4(NCO)_2$; *Physical Properties:* Molecular weight 160, Melting point, 52-3°C; *Chemical Properties:* Reacts with compounds having an active hydrogen atom; *Suggested Uses:* Manufacture of rigid and flexible urethane foams, resins, adhesives, etc; sizing fabrics; *Availability:* Pilot plant quantities.

POLACET* LATEXES

(Harshaw polyvinyl acetates)

(Harshaw)

Polacet Latexes are polyvinyl acetate latexes offered in homopolymer and copolymer types. These latexes can be used for bodying, stiffening and bonding. Exhibiting good compatibility with starches, imparting a better hand than starches and softeners alone, while minimizing starch dusting are features said to be imparted by the use of these materials, especially for back filling finishing. Finishes to improve snag resistance, crush resitance, and improved handle on nylon and rayon are suggested based on these latexes. Tuft binding of pile fabrics to prevent slippage of synthetic fibers and to impart stiffness and handle are further applications of these latexes. Bonding of nonwoven fabrics is an increasing textile use. They can also be used for rug backing and felt stiffening.

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* Trade-mark

POLY-COUPLER*

(Textile Adjuncts)

A water miscible resin co-polymer, nonionic, used in combination with urea- and melamine-formaldehyde resin baths to prevent the excessive liberation of free formaldehyde, after cure, and to help prevent the formation of methyl amines on un-neutralized resinated fabrics. It is stated that it does not discolor, modify hand, nor contribute disagreeable odors to finished materials. To be applied to natural or synthetic resinated fabrics. Applied with the resin in the pad bath, or as an after-wash on freshly resinated and cured finishes. The product does not alter standard resination techniques, except that the wash may be eliminated. Does not alter curing time for the resin treated fabrics.

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* Trade-mark

PREELUBE*

(Tanatex)

A new surfactant, lubricant and softener. Preelube is said to be useful as a dyeing assistant, dyebath lubricant, chafe and crack mark inhibitor, and non-rewetting detergent for goods to be finished with permanent water repellents. Data sheet available.

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* U S Patent pending

PYROSAN A

(Laurel)

A water soluble organophosphate fire retardant. It is salt free and is recommended by the manufacturers where a minimum afterglow is required. It eliminates the harsh hand and efflorescence that is associated with inorganic fire retardants.

PYROSET* FIRE RETARDANT N-2

(Cyanamid-Resin)

A durable stiffener and fire retardant for nylon fabric. It is especially useful on nylon Raschel netting where maximum stiffness and fire retardancy are required. Pyroset Fire Retardant N-2 has exceptional product stability and pad bath stability.

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* Trade-mark

RAYCOTE

(Precision-cut viscose rayon fiber)

(Rayon Processing)

This product is finely-cut precision-length viscose rayon fiber or flock. It is said to have good properties for thickening dye pastes for printing.

RESILOID B

(Colloids)

A new polyvinyl alcohol adaptation for delivering stiff finishes. It is said to offer excellent compatibility with resins, starches and gums, easy solubility, low cost and freedom from insoluble spots. Provides an excellent starch binder. Can be insolubilized with usual polyvinyl alcohol setters or with melamine or urea formaldehyde resins to produce crisp and springy finishes.

RESIPON KD

(Arkansas)

A dimensional control finish primarily for rayon fabrics which is said to have excellent durability to multiple launderings. It imparts a soft full-bodied hand, and its chlorine retention is practically negligible. Like all thermo-setting resin finishes, it requires high temperature curing and a suitable catalyst. For most applications 10% to 15% on the volume of the bath is required with the necessary catalyst. One of the catalyst formulations recommended for this purpose, is a combination of diglycollic acid and zinc chloride. The treated fabric is cured for five minutes at 310° F, followed by a mild alkaline rinse, and then given a final drying. Resipon KD is a viscous water-white liquid which dissolves readily in water at all temperatures, and has a pH range of 7.0 to 7.5. It is compatible with other thermo-setting resins and, also, selected softeners may be used in the same bath if desired.

RESLUBE — HOSIERY FINISH

(Fabric Chemicals)

A new one unit product for the finishing of nylon hosiery that combines a modified resin emulsion with a lubricative dulling emulsion. This combination is claimed to produce the following excellent features: gives the hose a full bodied crisp silk like hand, imparts remarkable resiliency and shape retention, gives smooth uniform dulling, allows for easy boarding, and improves snag resistance.

RESOLIN* N

(Sandoz)

A wetting, penetrating and rewetting agent of the dioctyl sodium sulfosuccinate type. Resolin N is said to produce excellent results, wherever rapid wetting in a neutral or slightly acid medium is required.

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* Registered Trade-mark

REXOBASE GA

(Emkay)

A newly developed synthetic detergent and concentrated emulsifier for kerosene and Varsol. One part base and four parts kerosene (or Varsol) mixes together to give a bright soluable oil which will not separate on storing. This mixture is used as a scouring agent for obstinate oil and grease in rayon, nylon, and acetate fabrics. Rexobase GA is particularly applicable where acid conditions prevail.

RHOPLEX B-15

(Rohm & Haas)

An extremely stable aqueous dispersion of an acrylic polymer, used as a binder in pigment printing and for imparting a soft hand in fabric finishing.

RHOPLEX B-85

(Rohm & Haas)

An aqueous dispersion of an extremely hard acrylic polymer supplied in anionic form, recommended by the manufacturers as an effective delustering agent.

RHOPLEX E-21

(Rohm & Haas)

A soft, aqueous dispersion of an acrylic polymer designed for backcoating. It is anionic, of low viscosity and can be used alone or with fillers; particularly applicable to upholstery fabrics.

RHOPLEX S-1

(Rohm & Haas)

A soft, flexible thermoplastic acrylic resin emulsion, which is anionic. It is applied in combination with thermosetting resins to impart abrasion resistance and enhance crease recovery of cotton fabrics.

RHOZYME GC

(Rohm & Haas)

A high-strength liquid diastatic enzyme said to possess excellent heat stability and desizing efficiency.

SANDOPAN* DTC

(Sandoz)

An entirely new crypto-anionic surfactant in liquid or gel form, said to combine the best characteristics of soap and nonionics without suffering of the drawbacks of either. It is stated that it is unaffected by hard water, is stable to strong acid and alkali and shows no cloud point at elevated temperatures. It is stated that Sandopan DTC shows excellent detergency, strong wetting and suspending power and good rinsability.

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* Trade-mark registered

SCOURLON-PENTALON
(Fancourt)

A one-bath scouring and dyeing process for nylon hosiery or piece goods, combining in two products an alkaline powdered detergent with a penetrating-leveling organic dyeing assistant. These products, it is reported, allow nylon hosiery or piece goods to be scoured and dyed in the same length of time previously required for scouring. A large saving of money along with clean level shades with good unions are obtained by the use of this method. It is reported that the extreme competition in the hosiery business has created an unusual demand for these products.

SEYCO-PEN SL
(Seydel-Woolley)

A new type of wetting agent and penetrant, which is designed to have its maximum effectiveness in solutions containing appreciable amounts of caustic and salts such as used in vat dyeing operations. It is stated that it will not foam excessively, and gives rapid and uniform penetration of the goods, and assisting in obtaining a uniform level color.

SEYCO SYNCOTE S
(Seydel-Woolley)

Designed as a weaving lubricant, Seyco Syncote S is applied to warp yarns between the drying section of the slasher and the lease rods. It has an anti-static effect through its lubricating action, and is thus particularly useful for after-waxing of synthetic warps. This lubricating effect decreases the abrasion between yarns and thus minimizes fuzzing due to static, and hand breakage. It is claimed that difficult to weave synthetic constructions of both filament and spun yarns can be made much easier with the resultant lower percentage of seconds by application of Seyco Syncote S. Since Syncote S is readily dispersible in water, it is very easily removed in any finishing or desizing operation.

SEYCO-TERGE T
(Seydel-Woolley)

A flake detergent, based on alkyl aryl sulfonates for high detergency, and containing also fatty alcohol sulfates, which in addition to being excellent detergents, contribute a certain amount of softness to the goods and thus do not produce a harsh hand which is produced by a straight alkyl aryl sulfonate. Seyco-Terge T may be used on all types of fibers.

SEYCO-VEL D
(Seydel-Woolley)

A nonionic softener, particularly interesting because of its compatibility with most of the materials made in textile processing. It is stated that the product is especially attractive for use with resin finishes, because of its compatibility and because of the fact that it will not yellow to the extent that a great many cationic softeners will. Seyco-Vel D is readily soluble in water and stable in storage.

SOFTENER 64
(Glyco)

100% active modified amide in flake form which is readily converted into a cationic softener by acetic or formic acid. It is said to be an effective softener for rayon and cotton, giving an excellent hand. It is further said to be unusually resistant to high temperatures and hot pressing. It assures maximum whiteness on white fabrics and minimum color change on dyed goods. It is compatible with some urea resin finishes.

SOFTENER 66
(Glyco)

100% active nonionic softener for cotton, wool and other fabrics. It is said to produce a full, soft hand and to assure good scourability. Since it is nonionic it can be applied from a neutral alkaline or acid bath as desire. A hygroscopic agent, such as glycerine is frequently used with Softener 66.

SOFTENER 67
(Glyco)

100% active, liquid nonionic softening agent. It is used with other softening agents when greater limpness of hand is desired. It is claimed to be excellent for cotton, wool and other fabrics. Since it is nonionic it can be used with cationic softeners as well as with anionic softeners.

SOFTENER 80-S
(Glyco)

100% active fatty amide in flake form. It is readily converted into a cationic softener by acetic or formic acid. It is compatible with the urea resin finishes. It is said to be an excellent softener for cotton, rayon and other fabrics. Maximum whiteness is obtained on white fabrics and minimum color change on dyed goods. It is said to be very resistant to yellowing even at high temperatures and hot pressing. It is compatible with resin finishing baths.

SOFTENER 81
(Glyco)

100% active, nonionic fatty ester supplied in bead form. It is a particularly effective softener for cotton and wool, as it is said to have excellent heat stability and resistance to yellowing. It is generally used with a stearate soap as a dispersing agent and a hygroscopic agent such as glycerine.

SOFTEX No. 595
(Houghton)

An anionic softener. It is a smooth white paste readily dispersible in water at room temperature and is stable in any proportion. It is applied from an emulsion in the winding of yarns. It is used as a softener in the finishing of all types of fabrics and may be used alone or in combination with gums, etc. It is stated that it is chemically stable and will not yellow on storage.

SOFTEX No. 596
(Houghton)

A cationic softener for synthetic fibers and cotton. It is especially recommended by the manufacturers for spun Orlon and Acrilan knit goods. It is also said to be effective on filament nylon fabrics. It is claimed to have excellent resistance to yellowing.

SOFTEX Y
(Fancourt)

A new amphoteric type of softener for cellulosic fabrics said to exhaust readily on the material from a dilute aqueous solution. It is claimed that this product imparts a soft full hand to fabrics, and does not yellow when exposed to the usual temperature employed in dyeing textiles.

SOLON F
(Eastern)

An amino polycarboxylic acid sequestering agent specifically compounded to remove iron during kier boiling. It is stated that use of Solon F will result in elimination of troublesome rust spots or yellowing due to presence of metallic salts (particularly iron) in the kier water. Samples on request.

SOLVENT CLEANER XM
(Mona)

An emulsifiable cleaner for the removal of latex from fabrics. It is nonflamable.

SOROMINE* CS
(Antara)

A cationic softening agent for cotton, wool and synthetic fibers. Soromine CS, a fatty amino amide compound in the form of a white paste, is said to be an effective softener for bleached white or dyed yarns, hosiery and piece goods and has excellent resistance to yellowing. It can be applied to fabrics from long liquors or by pad or mangle. This product is used in melamine and urea formaldehyde resin finishes to provide softness and to minimize excessive loss of tear strength.

* Trade-mark registered

STANDAFIN* WFN
(Standard Chemical)

A high polymer resin emulsion which acts as a plasticizer for thermo-setting resin materials. It is stated that this product will increase the wet crease resistance of cotton fabrics treated with thermo-setting resins.

* Trade-mark registered

STANTEX* #101
(Standard Chemical)

A new type softener in the form of a white paste having nonionic characteristics. It is stated that it has excellent stability to heat and oxidation and will not cause discoloration of whites. It is stable in solution over a wide pH range and is not affected by water hardness or low concentration of various salts. Stantex* #101 is said to impart a high degree of softness and lubrication to the fabric.

* Trade-mark registered

STANTONE BPS
(Standard Chemical)

A substantive softener and anti-static agent in the form of a white paste that is very efficient at low bath concentrations. Wide use has been found for Stantone BPS on nylon, acetate, and synthetic fibers. It is stated that it has minimum effect on light fastness and shade of dyed fabrics and does not discolor white fabrics. Application can be made in the rinse after dyeing or by padding in the finishing operation.

STRIPAID N CONC
(Maher)

With Stripaid N Conc it is claimed that a process has been developed which will satisfactorily strip most naphthol colors.

THE SUPER-AMIDES: L-9; GR; GC
(Onyx)

These alkanolamides are said to contain up to 50% more amide than the alkanolamide fatty acid condensates of highest concentration hitherto available. Valuable textile applications are based on their synergistic action with conventional textile processing assistants, to reinforce detergency, foam building, and foam stability. They provide versatility in combining wetting, penetrating, foaming, and dispersing properties.

SUPRACET
(Stein, Hall)

This product is used in textile mills for sizing of filament acetate yarns. It is a colorless, free-flowing powder which disperses easily in cold water and cooks up like a starch. It is compatible with all types of plasticizers. This product has a pH of about 6.5 and does not require stainless steel or acid resistant equipment. It is said to offer these advantages or savings: unusual protective film reduces warp breakage; will not flake off—yet easy to desize; concentrated dry powder—simplifies shipping, storage and handling problems; easy to prepare, merely cook in water; colorless; close control of manufacture permits uniform size pick-up; more economical, lower initial cost, greater yield.

SUPRANYL
(Stein, Hall)

This product is used in the textile mills for sizing of filament nylon yarns. It is a colorless low pH copolymer of 30% solids concentration. It has a viscosity in the concentrate of 600-1000 cps. It requires no addition of penetrants and is easily diluted in all proportions with water. It is said to offer these advantages or savings: excellent adhesion to yarn, yet easy to desize; imparts high degree of abrasion resistance to the yarn, minimizes breakdowns; colorless; requires no additives; more economical, lower initial cost, stands greater dilution.

SUPRONYX
(Onyx)

A modified sodium alkyl sulfate, synergistically blended for superior wetting, foaming, emulsifying, and detergency properties. It is claimed to be an excellent scouring compound and dye assistant for wool, synthetics, and silk, and with

alkaline builders, outstanding on cotton. Although neutral and mild in character it is said to possess outstanding soil-carrying properties.

SYNTERGE 748

(Colloids)

A new, nonionic condensate detergent and dispersing agent especially adapted for boiling off or dyeing waxed greige goods, especially nylons, Orlons, Dacrons as well as rayons and acetates.

SYNTHRAPOL* KB

(Arnold, Hoffman)

A 97% active nonionic surface-active agent developed primarily for use in the general wet processing of textile yarns and fabrics. It is said to possess excellent detergent properties, especially on cotton, and extremely rapid wetting action on all wettable fibers. Synthrapol KB is highly recommended by the manufacturers as a kier boil assistant and for soaping off prints.

* Trade-mark

TACANOLS*

(Textile Adjuncts)

A series of nonionic surfactants possessing modified scouring, wetting, and emulsification properties. They are said to possess superior pigment dispersing properties with extremely low foaming characteristics. Odorless and scented forms are available upon request. A mixture of commercially available surfactants, compounded with special agents to increase surface active properties.

* Trade-mark

TERGOLENE CONCENTRATE

(Fabric Chemicals)

This product, an alkyl phenolethylene oxide condensate, is said to be an excellent detergent, emulsifying, and penetrating agent that can be used in scouring and dyeing operations. Tergolene Concentrate is 100% active and stable to acids and alkalies. It is suitable for use on all fibers; cotton, rayon, acetate, silk, woolens, nylon, and other synthetics.

TINEGAL* W

(Geigy)

An auxiliary with a wide number of useful functions in textile processing and coloring. Some of the various uses for which it is recommended by the manufacturer are: brightening naphthol color prints and dyeings and at the same time reducing crocking by incorporation in the final wash; lightening over-dyed shades on wool and nylon colored with acid, milling metalized or chrome colors; vat color retarding and leveling agent on cotton and/or rayons; leveling agent for cotton fabrics where unevenness is due to different grades of cotton or yarns; retarding, penetrating and leveling agent for direct colors on rayons and/or cottons; retarding and leveling of acid colors being applied to carbonized, Santorian treated and other type of wool not thoroughly neutralized and in an acid condition; leveling agent for tippy wool end/or mixed grades of wool.

* Trade-mark registered

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m-TOLYLENE DIISOCYANATE (Mixed Isomers)

(Westvaco)

Formula: $CH_3C_6H_3(NCO)_2$ (80% 2,4 - 20% 2,6); *Physical Properties:* Molecular weight 174, Melting point, 12°C; *Chemical Properties:* Reacts with compounds having an active hydrogen atom; *Suggested Uses:* Manufacture of rigid and flexible urethane foams, solid elastomers, resins, adhesives, etc; sizing fabrics; *Availability:* Pilot plant quantities.

TRITON CF-10

(Rohm & Haas)

A nonionic detergent with minimum foaming tendencies, specifically recommended by the manufacturers for pigment padding, dyeing, finishing, etc, where excessive foaming is objectionable.

TUFF

(Tanatex)

The product is claimed to improve the abrasion resistance of goods finished with urea and melamine formaldehyde resins, Avcoset* and similar finishes. Tuff is compatible with both thermosetting and thermoplastic resins. Besides markedly improved abrasion resistance, 2 to 5 percent Tuff owg is said to provide a warm and silky hand.

* American Viscose Corp.

UVERSOFT "D"*

(Harshaw)

A cationic surface active agent prepared primarily for the textile and paper industries. It is said to possess a combination of properties which makes it unique among the presently available compounds of this general class. Uversoft "D" is said to produce a full, soft hand with little if any reduction in moisture absorbency of the treated material. Since this product is a cation-active agent it is substantive to cellulose, protein, siliceous materials and various other substances. In a mill it can be exhausted from a long bath and is said to have an excellent retention in an aqueous system. It consequently gives maximum economy in application and use. For a number of applications Uversoft "D" is said to be an outstanding anti-static agent. It should be considered for situations where the accompanying softening action is not objectionable. The handling characteristics of Uversoft "D" for the mill are claimed to be outstanding. It is supplied at the unusually high active solids content of 75% which necessitates minimum freight charges and handling of drums at the mill. On a poundage basis, one pound of Uversoft "D" is said to be equal to approximately five pounds of the usual softening agents. Surprisingly however, it is easily diluted to its working concentration by gentle stirring in lukewarm water. Uversoft "D" is a pale yellow, somewhat viscous fluid which yields a faintly opalescent solution in water. Solutions are stable to acids and bases and in the presence of limited amounts of polyvalent ions.

* Trade-mark

VELUBRA FINISH JLX

(Amalgamated)

A soft paste, light in color and readily dispersible in water. It is said to combine the qualities of a cationic finish with lanolin. It is stated that it yields a soft, full hand with excellent lubricity. It is recommended for the finishing of nylon hosiery and bobinette and may also be used for wool.

VELUBRA SOFTENER DTX20

(Amalgamated)

A light tan water-dispersible paste. This product is cationic in nature and is said to have excellent softening properties for wool, particularly wool sweaters. It is applied as the final treatment and yields a full, soft hand.

VELUBRA SOFTENER L-4

(Amalgamated)

A water-dispersible white paste, amphoteric in nature and designed for the softening of cellulosic and synthetic fibers. Being amphoteric in nature, it may be applied within a wide pH range and yields a maximum of softening with a minimum of yellowing.

VELUBRA SOFTENER OX3

(Amalgamated)

A light tan water-dispersible cationic paste, designed for the softening of synthetic film. It is stated that it has been used very successfully for the finishing of Orlon sweaters, producing a very desirable soft hand.

VELUBRA SOFTENER 16XX

(Amalgamated)

A soft, amber paste, cationic in nature and containing lanolin. It is a modification of Velubra Finish JLX and is especially recommended by the manufacturers as a softener and lubricant for nylon hosiery. Great ease of boarding results from the use of this product.

VIKON RL

(Vikon)

A high stability 55% polyvinyl acetate emulsion producing a film of relatively high clarity. It has been developed especially for textile finishing where it shows unusually good stability in the pad-mangle and during drying on cans. It also can be used for hot calendered finishes successfully. Vikon RL is being used on printed fabrics because of its resistance to causing mark-off of the dyestuffs.

WARCO* 354

(Warwick)

A resin for textile finishing which is said to impart excellent shrinkage stabilization on a wide variety of textile fibers and fiber blends. It may be used in conjunction with conventional textile resins used for building hand as well as imparting shrinkage stability. Warco 354 is easily handled and cures at the conventional temperatures on equipment used in most textile finishing plants.

* Trade-mark registered

WARCOLENE* 362-M

(Warwick)

A water-soluble white paste readily dispersible in water at 60°C. This product is claimed to be an excellent softener for cotton textile fabrics. It is compatible with starch and dextrine finishes commonly applied to cotton. Warcolene 362-M is said to possess excellent wetting and rewetting properties useful in many types of finishing operations.

* Trade-mark registered

WARCOSOL* 23T

(Warwick)

A colorless water-soluble finishing agent which may be used in the dyehouse operation and in the finishing operation prior to "Sanforizing." It may also be applied to cottons, rayons, and to rayon blends. Warcosol 23T is said to be particularly effective when applied to fabrics requiring a storage period prior to rewetting for a final finishing operation such as in "Sanforizing."

* Trade-mark registered

WATER-SKIPPER*

(Textile Adjuncts)

An aerosolized water repellent for the special treatment of natural or synthetic fabrics, protective clothing, shoes, felt, paper, metal, or wood. It is claimed that it renders porous materials water repellent and nonporous materials water proof. Recommended by the manufacturers for the treatment of workman's clothing, industrial equipment, electrical wiring, and equipment exposed to rain or snow. Can reduce or eliminate rust on metal equipment due to excessive moisture. To be used as a special surface treatment for calendar, embossing rolls, and curing cans to prevent sticking. Contains high melt waxes and silicones and a new tung oil derivative plus Freon. Packaged in 12-ounce aerosol spray cans or nonreturnable three pound commercial spray cylinders.

* Trade-mark

WICA RESINS

(Wica)

Three new modified urea-formaldehyde resins. These products offer the finisher numerous possibilities to economically upgrade his fabric.

WICA RESIN 528 is especially recommended by the manufacturer to provide the utmost stabilization. A 50.0% solids product, it is stable in storage and applied in the usual manner.

WICA RESIN 550 is a 60.0% active resin recommended by the manufacturer for "building" and contributing more body and springiness to synthetic piece goods.

WICA RESIN 551 is said to provide stabilization and permanence of finish with low chlorine retention value.

WICA SUBSTANTIVE SOFTENERS

(Wica)

Three new substantive synthetic softeners. This series offers the finisher a full range of ionic activity. It is stated that these materials do not discolor white goods or affect dyed shades appreciably. Minimum effect is shown on light fastness resistance and the softeners are said to be extremely resistant to high temperatures.

WICA SOFTENER T-535 is especially recommended by the manufacturer for use in resin baths and is highly compatible with the ordinary finishing materials encountered. T-535 is 50% active and cationic. Bath stability is excellent over a wide pH range.

WICA SOFTENER A is a 50% active anionic finishing agent and is recommended by the manufacturer for resin baths where metallic salts are employed as catalysts. Excellent penetration for high twist yarns and tightly constructed fabrics is said to be offered.

WICA SOFTENER N is a 50% active neutral softener.

X-TAN-ASSIST

(Tanatex)

An economical bleaching and stripping additive, X-Tan-Assist is said to inhibit corrosion and odor caused by sodium chlorite and increase its effectiveness up to 50%. With X-Tan-Assist present, adds of sodium chlorite may be made at high temperatures without any sudden development of chlorine dioxide. X-Tan-Assist also reduces the surface tension bleaching bath, resulting in a more uniform bleaching action. It is claimed that X-Tan-Assist allows for easier control of stripping because it stabilizes any pH on the acid side.

XYNOSOLVE

(Onyx)

A powerful low-cost dye solvent and hygroscopic agent for textile dyeing and printing. It is stated that it is a good dispersing agent for disperse and other insoluble dyes and in printing improves color value, reduces the possibility of specking and gives excellent working properties.

XYNOTAF HV, V, and LV

(Onyx)

Solutions of a thermoplastic, vinyl type polymer. Uses include: textile finishes to impart special stiffening and bodying effects and effective back-filling finish for a wide variety of fabrics. Available in three different viscosities, and providing different degrees of stiffness.

XYNOTAF WS

(Onyx)

A slightly viscous light amber colored solution of an alkali-soluble alkyd resin that is said to impart to fabrics the rustle and feel characteristic of pure silk taffeta. A clear face and rich luster without color change are obtained. The resin is compatible with textile softeners, and with certain synthetic polymer resins a wide range of stiffness and surface effects are obtainable.

EQUIPMENT

ALL-CHEM PROCESS PUMP IMPROVEMENTS

(Eco)

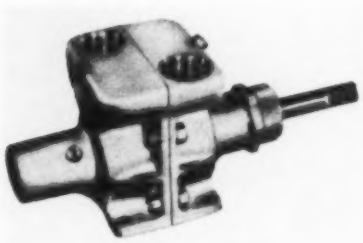
The Eco All-Chem stainless-steel positive-displacement process pump is now available also in type-20 alloy and Hastelloy C for broadened service with corrosive materials. A chemically inert Teflon-ceramic seal is now offered to supplement the conventional corrosion-resistant packings, and a choice of impeller materials permits selection of neoprene, Teflon or formica. Teflon bearings are said to extend service life with non-lubricating and corrosive fluids.

It is claimed that, by virtue of its corrosion resistant materials of construction and its linear flow characteristics, the Eco All-Chem is well adapted for nonfoaming and nonturbulent delivery of hazardous or sensitive fluids, emulsions and solutions, at elevated temperatures. The 20 alloy pump, in particular, is reported to be suited for corrosive service in intermittant operation.

All-Chem pumps are regularly fitted with two ¾" NPT ports, but may be specified with two additional ports to meet special requirements, such as simultaneous feed of two dissimilar materials to obtain a mixed product. They are available in two models with capacity ranges to 3.5 gpm and 10 gpm at 1750 rpm, respectively.

Eco rotary displacement pumps are self priming in nonvolatile fluids and will handle viscous fluids to 600 SSU at motor speeds, or up to 900 SSU at reduced speeds, it is claimed. For aqueous fluids in pH range of 4 to 12, pumps reportedly are capable of operating against 100 psig and sustained working temperatures to 140°F, and when fitted with Teflon impellers, pressures to 80 psig and temperatures to 250°F reportedly may be obtained.

Pumps may be furnished mounted on bed plate for direct drive or direct connected motor, or may be mounted on specially designed pulley drive base, with or without vari-drive, or with explosion-proof air motor.



Eco All-Chem Pump

Blak-Ray B-100

BLAK-RAY® B-100

(Ultra-Violet)

A new long-wave black light source for inspecting materials before they are dyed to reveal differentiations in fabric structure which would affect absorption of dyes. Concentrating a powerful 100-watt beam on a limited area to bring out even the minutest variances, it reportedly exposes immature cotton, "cat-eye" cotton, oil spots, contamination, California cotton, differences in weaves, almost any potential cause of dye streaking. It is stated to be harmful neither to fabrics nor personnel. Spring tension fixes lamp in any position, and it can be hung over inspection table.

® Trade-mark

BOTTLE STOPPER CLAMP

(Central Scientific)

This new aluminum clamp, designed to hold rubber stoppers firmly in place in large storage bottles and prevent the stoppers from popping out, has been developed for use on 5-gallon or other size bottles that take a 2½-inch stopper.

The Cenco Bottle Stopper Clamp consists of a U-shaped yoke, measuring 3 inches from tip to tip, with a pillar at the base from which a hinged arm extends over the center of the stopper. An adjustment screw at the top of the pillar forces the arm downward on the stopper to hold it firmly in the neck of the bottle.

The wide surface of the yoke provides a secure clamp beneath the rim of the bottle neck. When clamped in center, the stopper is forced against the neck.

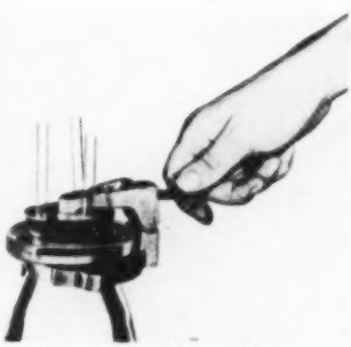
If desired, holes or slots for glass tubing may be drilled or filled through the clamp finger.

The clamps are priced at $5.00 each; $4.50 each in lots of 12; $3.75 each in lots of 36.

CARRIER REELS FOR ROPED GOODS

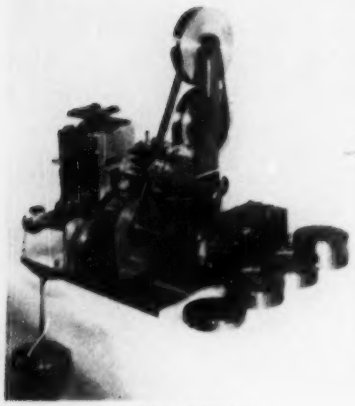
(Wiesner-Rapp)

Wiesner-Rapp Carrier Reels are used for conveying a wide variety of various types and weights of cloth. The drum-type carrier reel is provided with a rubber-covered rider roll in contact with the stainless-steel drum. This is said to have proved very satisfactory for long pull installation as well as for handling of all types of heavy and light weight fabrics in roped form. Because of a split frame and interchangeable drive assembly, the drum-type carrier reel can be furnished as a drag reel complete with drive and rider roll; driven draw reel without rider roll; draw reel without drive and rider roll; and as an idler reel, short frame without drive and rider roll. The bar-type carrier reel is said to be ideally suited to installation where minimum tension on the cloth is required. It is designed for an even pull without distorting the cloth. This reel also has the split frame and interchangeable drive units, reportedly permitting easy conversion from a driven draw reel, complete with drive to a draw reel, frame without drive or idler reel, short frame without drive. The bars are furnished in either straight grain hard maple or in stainless steel at slight additional cost.



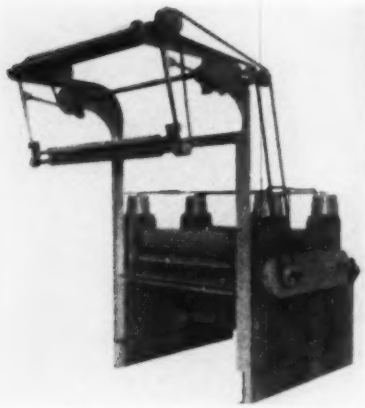
Cenco Bottle Stopper Clamp

Wiesner-Rapp Drum-Type Carrier Reel



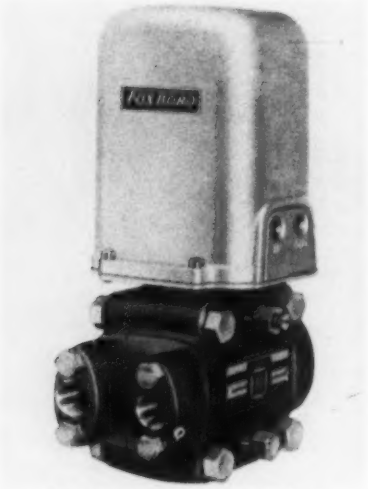
CSI-A Abrader

CSI Dividing Head

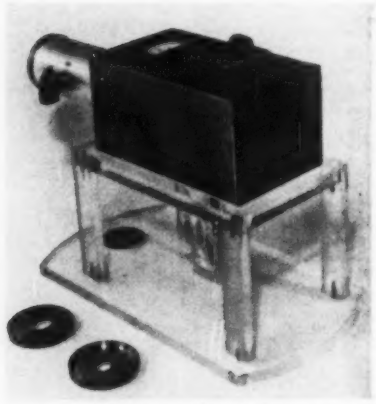


Wiesner-Rapp Dual Saturator

CSI Surface Abrader



Foxboro d/p Flow Transmitter



CSI Electrostatic Voltmeter

It is claimed to offer advantages or savings in interchangeability, long pull without distortion of cloth, and simplified maintenance features.

Reels are provided with a pot eye having an adjustable frame for positioning through an arc of 180°. The cloth is threaded through the pot eye up and over the reel. In the case of the drum-type reel with rider roll, the cloth is threaded under the rider roll and in contact with the face of the stainless-steel drum for maximum pull on the cloth.

CSI-A ABRADER*

(Custom Scientific)

Determines the resistance to abrasion of flat surface of materials, measured in terms of volume loss. Essentially the machine consists of two independent units, a vertical track that carries the specially prepared specimens around to meet the abrasive, and a carriage that rests on roller bearings and has provision for keeping a strip of abradant in continuous motion while the samples are being abraded. The directions of motion of the abradant and samples are opposite, and contact between the two is maintained by dead weights attached to the carriage by a cable-spring-pulley arrangement. The capacity of the abrader is 6 to 8 test specimens depending upon the number of calibration zinc specimens run. The size of the samples are ⅞" x 2½". The abradant width is 1" in 50-yard rolls.

CSI SURFACE ABRADER* *2

(Custom Scientific)

This is a redesign of the Universal Wear Tester for surface abrasion only. In redesigning the aims were to furnish a unit at a reduced cost, and it is stated that this was accomplished by using smaller castings and eliminating the air pump. Laboratory air source is utilized in place of the pump. The unit is said to be capable of reproducing either unidirectional or multidirectional abrasion of uniform intensity over the abraded area. The method consists of inflating the test specimen by controlled air pressure and accurately controlling the pressure of the abradant on the specimen by means of dead weight. This surface abrasion procedure reportedly makes it possible to control the tension of the specimen, the areas of contact, and the pressure between the specimen and the abradant, and minimizes disturbances arising from unevenness of specimen and interference of fabric debris.

* ASTM Designation D 1175-55T "Test for Abrasion Resistance of Textile Fabrics."

*2 ASTM Designation D 1375-55T "Test for Pilling Propensity of Textile Fabrics."

CSI DIVIDING HEAD

(Custom Scientific)

This new product is of interest to those concerned with maintenance problems in the textile field. It is said to be unique in that it is the smallest standard dividing head 40-1 ratio crank indexing on the market, a type unit which is said to be accepted standard equipment in metal working plants from coast to coast. Because of its size it reportedly may be used on any existing equipment. The swing is 4" and the jaw chuck capacity is 2½" with a reversible indexing plate having 18 rows of holes ranging from 15 to 49 holes per circle. As a tool room or production tool, a saving in time and increased profits and accuracy will be accomplished on profiling, drilling, light milling, layout work and engraving, it is claimed.

d/p CELL FLOW TRANSMITTER

(Foxboro)

New force balance transmitter for process flows measures differential pressures and transmits a 3-15 psi signal to a receiving, recording or controlling instrument. Its newest use is the measurement of dye liquor flow for control in pressure dyeing machines. It is currently being used on raw stock, beam, package and cloth-dyeing machines. It is adjustable over its entire range of 0-50" to 0-250" of water differential without change of parts. Can be close coupled to flow line and operates without need for restriction in pipe. Differential pressure (flow) signals are carried to transmitter by tubing from taps across an elbow in the dye-liquor line.

DUAL SATURATOR

(Wiesner-Rapp)

The Wiesner-Rapp dual saturator is used for wetting out and applying finish to a wide variety of fabrics in the open width. It is reported that it works efficiently in many different continuous bleaching operations.

Wiesner-Rapp cites the following advantages for the machine:

1) It is a self-contained unit with simplified functional features that give trouble-free service.
2) The tank assembly is of stainless steel construction and is easily cleaned.
3) Operating parts are easily accessible for preventative maintenance and adjustment.

The cloth first goes under the immersion roll in the first tank and through the first pair of squeeze rolls, then down under the immersion roll in the second tank and through the second pair of squeeze rolls and up and over a stainless steel draw roll in the folder assembly through two nips which oscillate to fold the cloth as it leaves the saturator. Both tanks can be drained and the liquor level kept constant by combination plug and overflow drains. Pneumatic cylinders, one at each end of each squeezer assembly, can be regulated while the saturator is in operation, reportedly providing for thorough saturation of the cloth. Pneumatic cylinders automatically raise the top roll from the bottom roll when the air is released. Expander assemblies and drive assemblies can be included to suit customer specifications.

ELECTROSTATIC VOLTMETER

(Custom Scientific)

This unit, developed by the Institute of Textile Technology, was designed to detect and measure electrostatic charges generated on textile materials during processing. It is portable and may be aimed like a gun. It is said to be extremely sensitive, with provisions made to permit reduction of sensitivity to one-tenth or one-hundredth.

ELITE DYE-BLEACH NET

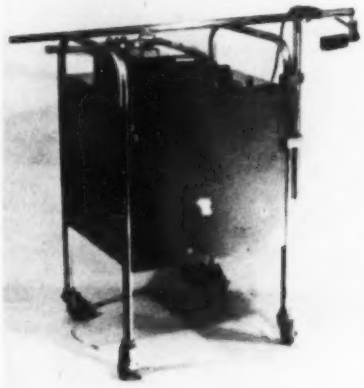
(Fabiok)

This new knitted Dacron net, known as the Elite, is said to be of finer mesh than previously available to the trade. The finer mesh is said to give better protection to the bag contents, and the Dacron fiber reportedly shows superior resistance to the powerful bleaches now being used.

HIGH-SPEED RECORDING TENSIOMETER

(Custom Scientific)

This unit was developed by the Summit Research Laboratories of the Celanese Corporation of America for the measurement and proper regulation of yarn tension. The instrument reportedly has a frequency response up to 120 cycles per second and a sensitivity as high as four millimeters deflection on a standard direct writing recorder per gram of tension in the yarn. It is stated that, even at this high sensitivity, the instrument can be used under normal plant conditions. The sensing head is compact and very rugged, with a beam type of transducer using bonded resistance strain gauges. Methacrylate plastic pulleys are provided to the beams and to use the instrument it is necessary only to place the pulleys over the running yarn and twist the sensing head until the yarn forms an S shape over the pulleys.

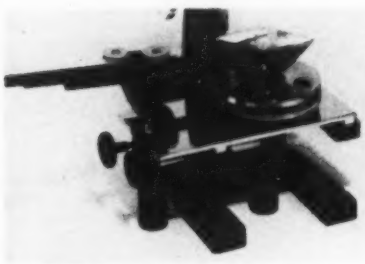


CSI Recording Tensiometer

HILLEMANN MICROMANIPULATOR

(Custom Scientific)

This unit, which was designed and developed by Dr H H Hillemann, School of Science, Oregon State College, Corvalis, Oregon, reportedly will produce a rapid or slow movement (in a straight line) and one of large or small extent (up to two inches in each of the mutually vertical planes), while at the same time retaining accuracy of control and smooth movement. It may be quickly attached or removed from the stage of the dissecting binocular. Depending upon which way the apparatus is oriented when slipped into the groove of the scope, it becomes either a right or left-handed instrument. The adjustable stage of the micromanipulator reportedly may be expanded to fit into the grooves of any microscope, after the glass platform of the scope is removed.



Hillemann Micromanipulator

HYVAC 7

(Central Scientific)

This mechanical vacuum pump is said to operate quietly and with practically no vibration, and it is claimed to have more pumping capacity per cubic foot of space occupied than any other high-vacuum pump on the market. The Hyvac 7 reportedly produces a free air displacement of 70 liters per minute and a guaranteed ultimate vacuum of 0.1 micron, yet its floor space requirement is 8½ by 17½ inches with an overall height of about 13 inches.

The Hyvac 7 is also said to be faster in operation, more streamlined in design and lighter in weight than any previous model. It reportedly pumps from atmospheric pressure to ultimate pressure in less than five minutes. The pump is finished in blue-gray baked enamel and its net weight mounted is 89 pounds.

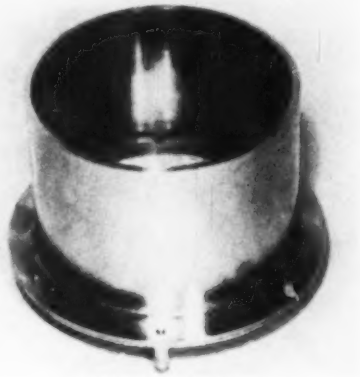
Other features include an "easy view" oil level window; a fast oil drain; and an intake O-ring connector coupling to save time in assembly and disassembly of vacuum system.

The Hyvac 7 is available with 1/3 hp motor for 115/230 volts, 60 or 50 cycles, or 220/440 three phase, 50/60 cycles, and with explosion-proof motor. Price of the unit, with base and motor, for 115/230 volts, 60 cycles, is $254.50.

LONG-LIFE SIEVES

(Custom Scientific)

These are recommended by CSI for reducing the cost of routine hourly quality-control testing. They are designed to allow the operator to replace the screen upon failure. The savings in cost of testing is said to be realized when the cost of the replacement of the screen alone is compared with the cost of the replacement of the sieve screen unit as now practiced. The frame of the sieve is constructed of chrome plated brass and the screens available reportedly meet the ASTM Specifications. Neither cover or pan is furnished with the sieves.



CSI Long-Life Sieve

MERCERIZING WASHER

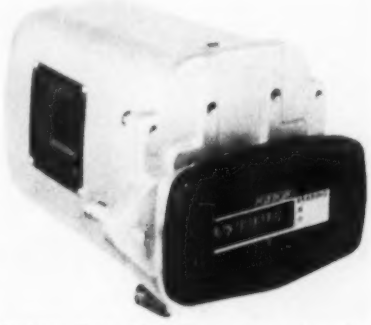
(Cook-P&N)

New design for open-width washer developed especially for mercerized goods reportedly provides better caustic removal and delivers goods wider than existing conventional washers. Tested for months in two finishing plants, it is said to offer better washing on twills, poplins, broadcloth, etc, and up to 1½" wider cloth from mercerizer. New counter-flow washing idea reportedly conserves water.

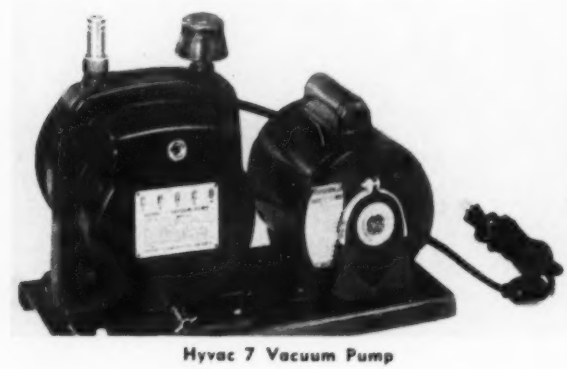
MODEL 14A PNEUMATIC FLOW INTEGRATOR

(Foxboro)

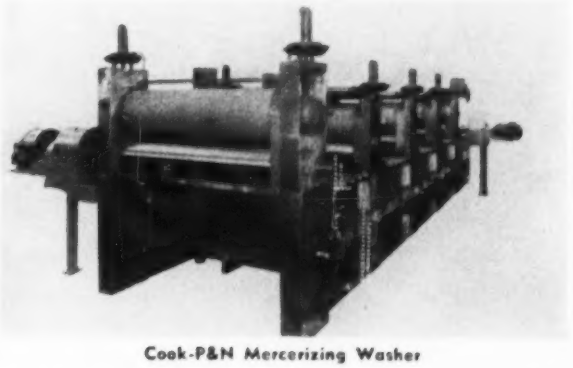
It is stated that accurate integration of steam flow to bleach ranges and other mill departments is achieved with this unique device, which operates on a centrifugal, force balance principle. It reportedly receives a 3-15 psi signal from a differential pressure transmitter and extracts the square root without use of cams so that an accurate integration of flow is obtained. Unit is geared to a counter which



Foxboro Type 14 A Pneumatic Integrator



Hyvac 7 Vacuum Pump



Cook-P&N Mercerizing Washer

gives a continuous tabulation of steam flow for accounting and other purposes. The integrator is so designed that it can be mounted at a control panel or at the point of measurement. Gears are replaceable for whatever unit of flow measurement is desired.

MULTI-STAGE WASHER

(Wiesner Rapp)

The Wiesner-Rapp Multi-Stage Washer is used for washing, soaping and treating a wide range of fabrics of various weights.

Great savings of water are said to be possible because the washer has compartments with staggered openings at stepped levels for true counterflow of the water. The clean water enters the washer at the exit end. This feature reportedly provides the cleaner water for treating the cleaner cloth as it progresses through the Multi-Stage. Clean water in the last compartment reportedly assures thorough cleansing or treating prior to passing through the exit squeezer. The clean water flows from the squeezer back into the washer.

Other advantages of the Multi-Stage, as claimed by Wiesner-Rapp:

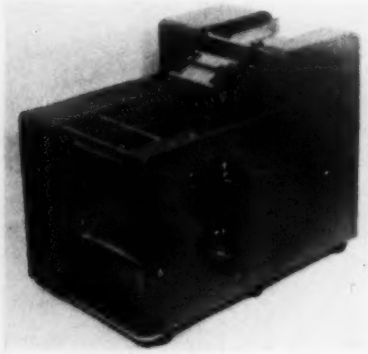
1) It is self-contained, self-supporting.
2) Available in several sizes.
3) Installs right on to the floor (no pit is required.
4) True counter-flow of water provides more economical operation.
5) Easy to thread up through access doors on each side of the machine, permitting operator to thread up from the outside.
6) The amount of slack or tension desired is adjustable during operation.
7) All moving parts easily accessible for easy cleaning and maintenance.
8) Tank rolls can be removed from either side.
9) Clean design has no pockets to catch lint, permitting quick change over from colored to white goods.
10) All bearings are easily accessible for lubrication and maintenance.
11) Separate compartments make easy arrangements for soaping, washing and/or cold or hot treatments of the cloth.
12) Exit squeeze pressure adjustable in operation for desired amount of extraction.

The cloth enters the Multi-Stage Washer through an adjustable swivel-type pot eye and roller assembly and is threaded over and under the tank rolls in each compartment, and then from the last compartment through the squeezer assembly and through a swivel-type exit pot and roller assembly. Upper tank rolls are driven; lower tank rolls are free running in external antifriction bearings with mechanical spring-loaded seals. The driven rolls can be adjusted for relaxed handling of the goods or for the degree of tension desired by means of two handwheel controls. Pneumatic pressure on the horizontal squeeze rolls at the exit end is adjusted by means of a pressure regulator valve for the desired amount of extraction. Speed of the cloth agitates the liquor in each compartment to turbulence, providing thorough washing action.

NEP TEST MACHINE

(Custom Scientific)

This machine was designed by the United States Department of Agriculture and is written up in the USDA Bulletin of November, 1954, titled "Laboratory Equipment and Method for Making Nep Tests on Cotton Samples". Designed to provide a rapid and satisfactory method of preparing specimens of raw cotton for nep evaluation, this laboratory-type machine has been devised to produce a relatively narrow web of fibers from a small sample of cotton. The design of this machine is said to incorporate the principal mechanical assemblies of textile carding machines in order to simulate commercial production methods as closely as possible. The machine reportedly will process a 3-gram sample of blended cotton to produce a continuous web 4" wide and approximately equivalent in appearance and weight to card web produced for 40-gram sliver. Sufficient web is produced to provide 10 specimens, which are placed on 4" x 9" boards for nep evaluation.



CSI Nep Tester

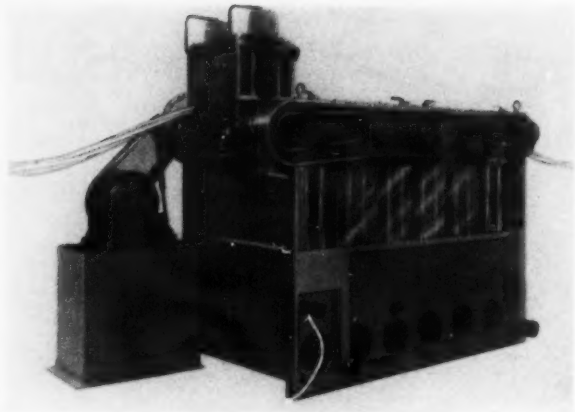
ASTM Designation: D 1446-53T "Method of Test for Number of Neps in Cotton Fibers."

OPEN-WIDTH SATURATOR

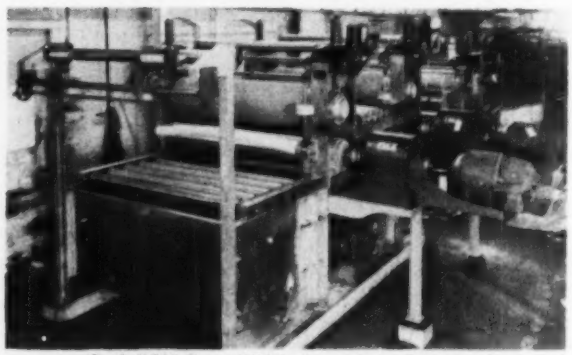
(Cook-P&N)

This new 2-compartment open-width saturator is designed for impregnating with desize, acid, caustic and peroxide solutions to provide more thorough and uniform results, it is stated. It is further stated that new principles for control of solution strength, uniformity of solution, and removal of foreign matter are used.

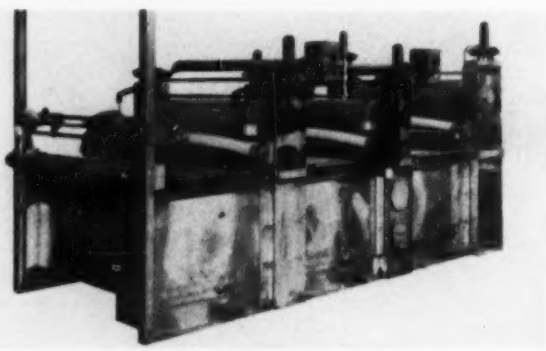
The machine is of stainless-steel construction throughout and new provisions are included for complete protection of bearings against corrosive solutions, it is claimed.



Wiesner-Rapp Multi-Stage Washer



Cook-P&N Open-Width Mercerizing Saturator

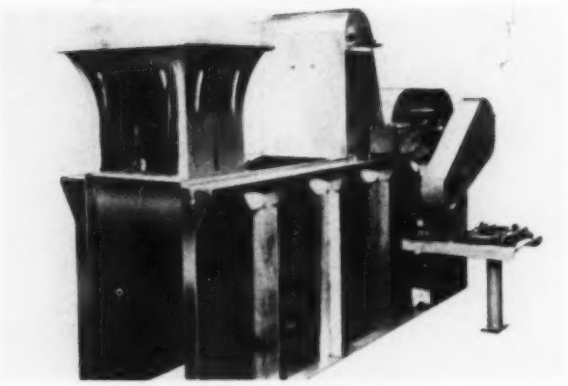


Cook-P&N Open-Width Washer

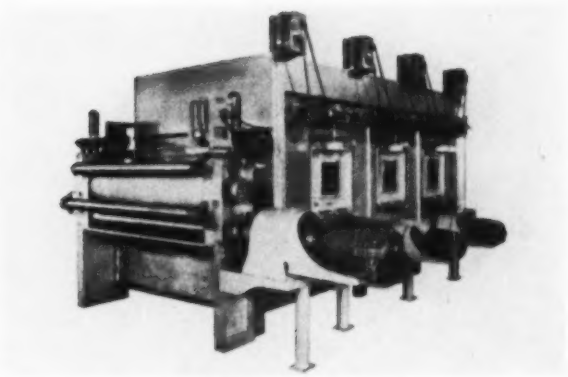
OPEN-WIDTH WASHER

(Cook-P&N)

New principle of wash-water counterflow is said to result in savings of dollars through reduction in amount of water used. New design of tanks and nip stands reportedly provides completely stainless steel washer at price competitive with existing designs using iron nip stands and other parts. New washer design includes new features for complete protection of bearings, slinging of wash water from roll ends and full-width skimmer overflows, it is reported.



Cook-P&N Rope-type Saturator



Cook-P&N Desize Steamer

PERMA-DEMON WATER DEMINERALIZER

(Enley)

This is claimed to be the only water demineralizer of its size that does not require cartridge replacement by the manufacturer. It is stated that it performs with the same economy as any larger size permanent cartridge type demineralizer and the initial cost is extremely low. It is designed specially for use in laboratories wherever distilled water is needed for industrial purposes. As raw water flows from the tap into the Perma-Demon, all ionizable materials are removed and the result is high purity water. The Perma-Demon consists of a cartridge of clear unbreakable tubular plastic with removable top cover which comes packed with built-in Carborundum porous stone filter and Fiberglas screen, inlet and outlet connectors with rubber hosing, and an aluminum bracket for attachment to wall near tap.

REDESIGNED CENTRI-CHEM® TYPE 20 STAINLESS STEEL CENTRIFUGAL PUMP

(Eco)

Eco states that greater volumetric capacity and materially reduced net positive suction head for its Centri-Chem® Type 20 Alloy centrifugal pump has been achieved by increasing the suction port size from ¾" to 1" pipe thread while retaining the ¾" discharge port.

The Centri-Chem pump is constructed of type-20 alloy throughout and features a Teflon-ceramic shaft seal for optimum corrosion resistance. Pumps are available with closed or semi-open impellers and can be opened for cleaning, without removal from line, by removing four wing nuts and the face plates. Face plates are available in type-20 alloy or Pyrex glass, the latter being useful when it is desirable to observe the medium being pumped.

It is pointed out that suction and discharge piping need not be disturbed when pump is serviced or when the shaft seal is replaced. Precision cast and dynamically balanced impellers, together with minimum shaft overhang, assure absence of vibration and long bearing and shaft seal life, it is claimed.

The pumps may be rotated 360° within their mounting brackets to permit incorporation into existing systems or OEM equipment and to simplify installation in inaccessible spots. They reportedly may be safely two-staged when heads higher than its 50 feet of water potential are desired.

The Centri-Chem pump is now available with a new pedestal mount designed to permit belt drive or direct coupling with any standard motor.

The pedestal mount is described as a precision-finished single iron casting with a smooth, durable, heavy-duty double-ball-bearing unit and a stainless-steel shaft in accurate alignment with the base plate. Thrust shoulders machined into the shaft rest on bearings that are designed to eliminate end thrust and take up the radial load. Reduced overhand permits the pump to be rotated in any position without obstruction by pedestal parts. Extra heavy pads are said to insure vibration-free performance when the unit is mounted on a concrete or steel bed plate.

RESIN KETTLE PYREX BRAND FOR MICRO WORK 250ml

(Greiner)

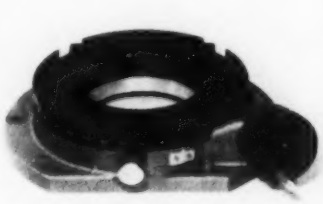
This very compact apparatus with six condensers for various tests includes a stirrer arrangement plus a thermometer adapter with stopcock take-off and graduated separatory funnel . . . 50ml in 1-ml.

ROPE-TYPE SATURATOR FOR CONTINUOUS BLEACHING

(Cook-P&N)

New design (patent pending) is said to eliminate damage done to goods in conventional saturator by tangles. It is reported that managers of two finishing plants have stated that not a single tangle has occurred during months of processing light to heavy weight goods including lawn constructions.

Latest design also includes built-in scray for automatic, tension-controlled, synchronization of saturator and J box.



CSI Rotary Table

Shear-Flow Jr

ROTARY TABLE

(Custom Scientific)

The Rotary Table, a companion to the CSI Dividing Head, is 5" in diameter. It reportedly can be used to advantage on small production milling, drilling and engraving machines to reduce layout work on many jobs. It is constructed of heat-treated castings with a worm-and-worm wheel movement. The outer rim of the turntable has 360-degree engravings and is numbered at every 10 degrees. The working surface is 5" in diameter and is provided with four tee-slots for ¼" bolts and 3" hole in the working area. The over-all height is 1½". The working area hole of 3" diameter may be filled with adapters for smaller plug diameters.

SHEAR-FLOW JR SMALL BATCH MIXER

(Gabb)

To be used primarily in laboratories for pilot mixing or for small batches, the smaller Shear-Flow is available on an adjustable counter-weighted stand.

The ¾ HP laboratory model operates under the same principle as the larger Shear-Flow Mixer. The mixing head consists of two impellers and a stator spaced closely together. The two stainless-steel impellers turn in opposite directions and create a pumping action which moves the material from the bottom upward through the veins of the stainless-steel stator. As the impellers, which are spaced .005" apart, turn in opposite directions, a shearing action takes place which breaks up and disperses any particles that are present.

The new mixer, the company claims, would speed up many mixing operations.

Specifications: overall height—40"; mixing shaft—19"; weight—76 lbs; horsepower—¾; speed: lower impellor—1750 rpm, upper impeller—2500 rpm; stainless-steel mixing head; impeller diameter—2¼"; carbon and stainless steel; face-type seal; quantity of mix—5-10 gal (depending on viscosity of material); spring balanced stand; height—65"; clearance of lift—19"; made of steel and cast iron.

STEAMER FOR CONTINUOUS DESIZING OF COTTON AND SYNTHETIC FABRICS

(Cook-P&N)

Automatic, internal control of cloth tension (patent pending) is said to make practical and safe the use of large capacity steamers to obtain high-speed production in the continuous desizing of cotton and synthetic fabrics. Savings in labor and time plus uniform, high quality desizing add up to make this an important new development, it is claimed. Steamer is stainless steel throughout.

(Concluded on Page 892)

Highlights
OF THE PAST YEAR

P J WOOD
Technical Director
Royce Chemical Co
Carlton Hill, N J

EDITOR'S NOTE: It is a pleasure to bring to our readers for the sixth consecutive year Mr Wood's "Highlights". Many of Mr Wood's observations cover material that has not appeared elsewhere in the American textile trade press.

PREPARATION & DYEING

IN Europe your author recently had the opportunity of discussing with the maker the action and value of a type of jig drive that was first introduced in 1946. Since that time a thousand jigs that have been fitted with this device are running successfully in all parts of the world. It is said that it can be attached to any type of jig and that it can be supplied in automatic or hand-operated form. The standard type of drive gives an average cloth speed of a little over 80 yards per minute with a roll of cloth having a maximum diameter of 30 inches.

BLEACHING

Another ingenious piece of apparatus produced by the same maker is a continuous-bleaching open-width range in which the conventional J box is replaced by a steam box in which the "dwell" of the goods is accomplished in a unique manner (See Figure 1). This device is quite new. Up to the present, it is said to be working satisfactorily in one bleachery in Ireland.

DYEING

ATTACHMENT FOR JIG ——— As mentioned before in previous "Highlights", there has been a great deal of investigation into the effect of vibrations, both sonic and supersonic, on the dyeing operation. One of the most recent of these resulted in the development of a device called the Turbinator, the invention of two Swiss professors, one a chemist and the other an engineer ——— a potent combination to be sure. This subject is mentioned in various old patents and in some new ones, but it remained for these two scientists to discover this very recent method, which bids fair to cause revolutionary changes and economies in the dyeing of fabrics in the open width, according to the revelation made in some of the foreign journals. It was the subject of much interest to visitors to the International Textile Exhibition in Brussels this year.

Figure 2 shows the device itself, which consists of a central tube R having fins or wings F. In this illustration the relative position of the cloth to be dyed is represented by the line G. The oscillation amplitude is very small and the frequency is high. The wings of the Turbinator do not touch the fabric, but the dye liquor is driven perpendicularly in a violent manner against the surface of the cloth. In a practical installation of such a member in a jig, baffles placed on the opposite side of the cloth, parallel to the fabric, serve to reflect the oscillation waves, so that a violent turbulence is set up on both sides of the fabric as it passes the oscillator. These baffles, not shown in the sketch, prevent loss of oscillation energy and concentrate it on the fabric, producing what may be called a "pressure and suction" effect. The frequency is 2200 oscillations per minute.

It is reported that continuous use of a Turbinator on a jig in a foreign dyehouse showed the following advantages: time saving, about 33⅓%; reduced consumption of chemicals; improved evenness of color and penetration.

It always has seemed to your author that some method of this type should result in better liquid transfer throughout the fabric, and consequently, should give better penetration. This seems to be the case with this device, as it is learned that a fabric containing 134.2 grams caustic soda per kilogram of cloth showed a residue of 51.5 grams after being washed with cold water (22°C) without the vibrator, and 11.9 grams caustic with the Turbinator in operation. Two ends were run on the jig in each case. With hot water (92°C), the caustic is almost completely washed out in two ends, both with and without the vibratory action. It is therefore deemed possible to make a great saving of heat units by using cold water with the Turbinator in this operation.

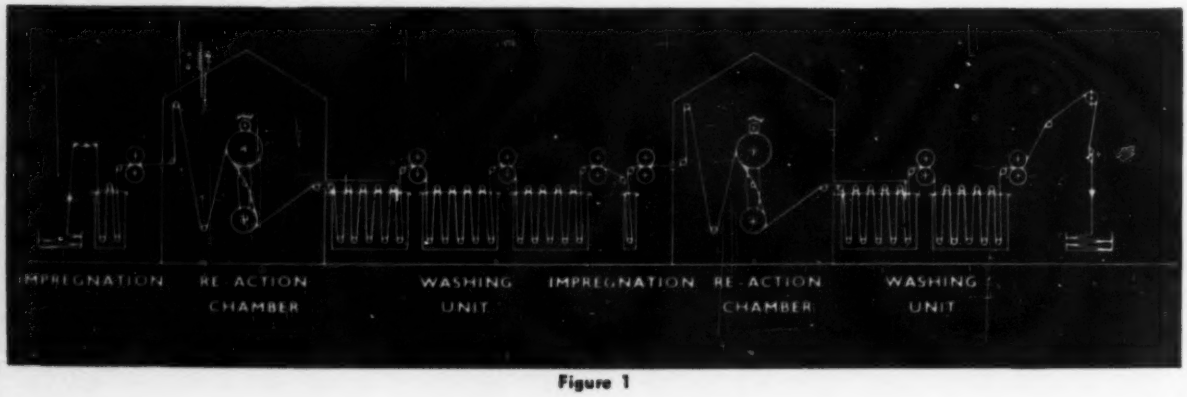


Figure 1

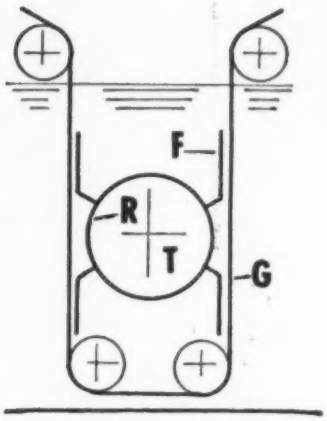
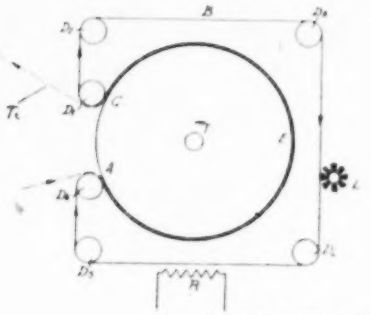
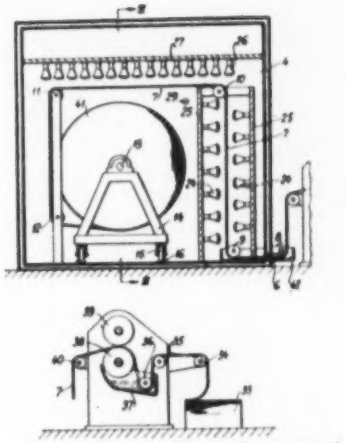


Figure 2



(Courtesy of *The Dyer*)

Figure 3



(Courtesy of *Textile Manufacturer*)

Figure 4

NEW PAD-STEAM METHODS——— Two new ways of dyeing goods by modifications of the pad-steam system have appeared during the past year. Both of them depend on conventional padding methods for impregnating the fabric with the dye liquor.

One of them calls for passing the impregnated goods over what looks like the drum of a Palmer finishing machine, except that it is provided with a rubber blanket to carry the dye-soaked cloth around and into intimate contact with the cylinder, which is internally heated, thus producing a boiling dyebath in and around the cloth (see Figure 3). This treatment is continued around the major part of the circumference of the cylinder, after which the cloth emerges and is passed on to some form of continuous washing machine. Means are provided to wash the press-blanket before it returns to the cylinder, to rid it of the excess dye which may be picked up by it in its passage through the machine, so that it meets fresh cloth in a clean condition.

The other device is a Swedish invention (see Figure 4). After the goods have been impregnated in a regular padding machine, this device takes the cloth into a chamber in which it is first heated to the required dyeing temperature by banks of infrared bulbs. Following this, it is rolled evenly, with not too much tension, onto a large diameter roller, still within the chamber; the ambient of the chamber is heated and supplied with the necessary amount of steam to prevent the liquor in the goods from drying out, so that the dyebath contained in the fabric itself can act upon the cloth for any desired period of time. The cylinder is rotated at a speed to prevent seeping of the dye solution in the cloth to the lower side of the roll. When the dyeing is judged to be complete, the direction of rotation of the cylinder is reversed and the goods are withdrawn from the apparatus and washed in any conventional way, suitable for the particular cloth being treated.

OPEN-WIDTH MACHINE———Some time ago, a Southern machine manufacturer invented and constructed a type of open-width piece dyeing machine, not unlike the well-known package-warp-dyeing apparatus. This was particularly well adapted for the dyeing of tricot goods, overcoming many of the defects arising from the use of the reel machine, and this really provided a step forward in the handling of this difficult article.

Now this manufacturer has gone a step further and adapted this same open-width principle to pressure dyeing of piece goods woven of some of the newer man-made fibers for which pressure dyeing seems to be indicated as the best procedure. The machine (see Figure 5) is quite simple in construction and the pump which forces the dye liquor through the beam of woven fabric is very powerful, reportedly insuring even and thorough penetration. The high pressure thus obtainable makes it possible to attain any desired pressure up to 50 pounds per square inch, which gives a temperature of about 300°F in an aqueous dyebath, which seems to be sufficiently high for all purposes.

There is provision for taking samples during the course of the operation without losing pressure; this is done by shutting off a small auxiliary vessel in the regular course of the dye liquor, in which is a sample of the material being dyed in the body of the apparatus.

One of the precautions that is necessary to successful operation of this device is the initial perfect rolling of the material on the perforated center, through which the liquor flows into the roll of cloth. The edges must be exactly aligned. This is no more than is required in good jig dyeing practice.

BACK TO SUPERSONICS——— The circumstance that has worked against the development of the use of supersonics in textile processing has been the economical production of high-frequency power.

It now appears that a low-cost, high-frequency rotating generator will be available in various capacities to energize

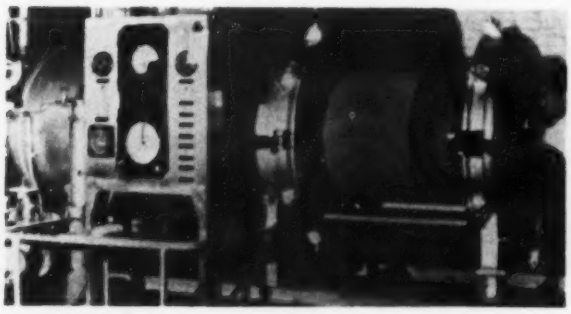


Figure 5

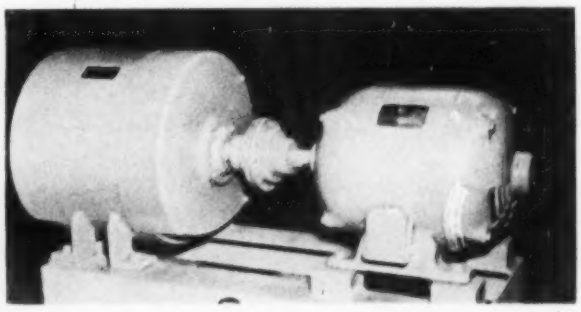


Figure 6

transducers capable of producing a range of vibrations in the ultrasonic range, which can be used to produce "cold boiling" or cavitation in dyebaths. The effect of such influences on the dyeing of difficult fibers, which are now thought to require high-pressure (and temperature) dyeing, can be investigated.

Figure 6 shows what a 5-kw unit looks like (20 thousand cycles per second.)

ENGRAVING

PHOTOELECTRIC PANTAGRAPH ——An exceedingly ingenious invention for automatically engraving printing rollers consists of two parts working in conjunction. The design is scanned by an electric eye on one machine while the other machine carries the roller which has a large number of burins which are actuated by electric impulses initiated by the electric eyes on the scanning or reading machine. The single machine type engraves one roller at a time, but it is possible to provide a machine which will engrave three rollers at a time, this type being provided with as many as 96 engraving burins. The rollers are coated with the same sort of protective film that is used in hand pantagraphing. The triple machine will engrave a different design on each roller from three designs placed on the roller of the scanning machine, or it can be used to make three rollers of a three-color pattern, all at the same time, the three colors of the pattern being separated and rolled around the roller of the scanning machine where they will be read separately by three different electric eyes, each of which actuates a different engraving machine of the triple device.

It is said that it is possible to produce all the various effects than can be made by hand pantagraph work, the enlargement or reduction of the design being mechanically accomplished by a so-called "decimal gear box" on which 3999 combinations are possible.

It is claimed that the precision of this machine is fully equal or even superior to that obtained by pantagraphing or by mill engraving. The time of production is cut from one-half to one-seventh that required by hand work. The engraving is formed of crossed and plain hachures, square and round dots and contour lines, all very neatly executed.

The scanning machine can be supplied with two or three extra reading devices so that the cutting time of patterns having very large ratios can be proportionally reduced.

Rollers can be engraved intaglio or in relief, hachured or screened, for printing textiles or wallpaper, or for embossing.

We once saw a "one-man bleachery" working in Connecticut. This appears to have the makings of a "one-man engraving shop." (See Figure 7)

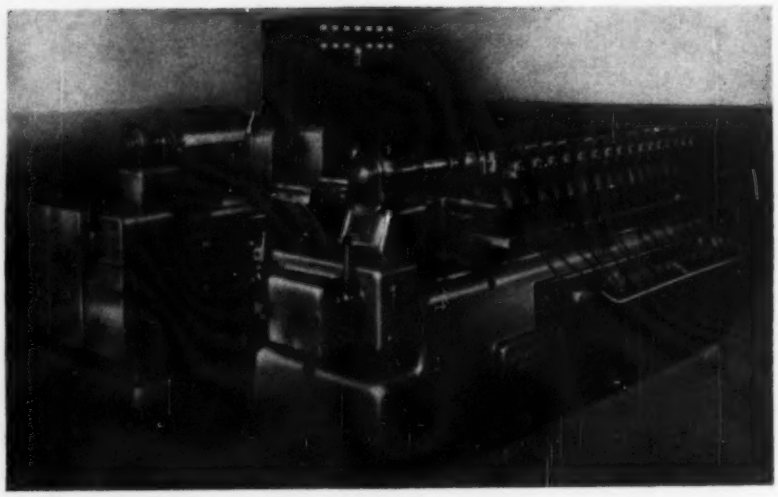


Figure 7

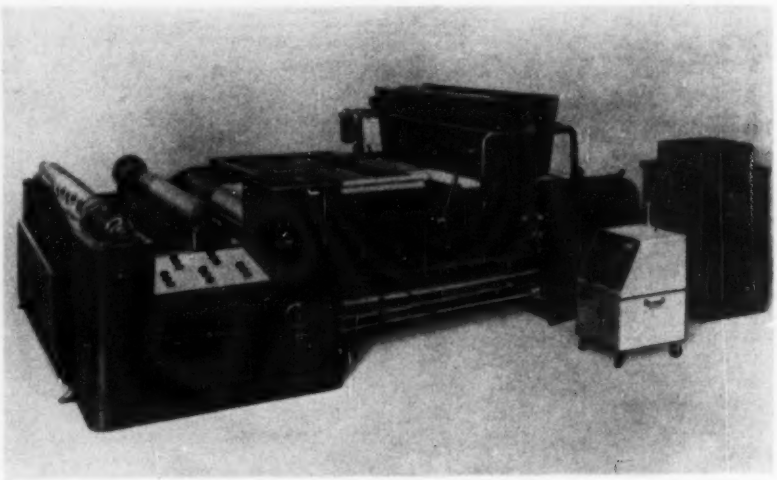


Figure 8

PRINTING

NEW THICKENER——The use of a polyvinyl alcohol polymer as a thickener for printing nylon fabrics is suggested by a German dyestuff manufacturer in a recently published patent. It is made by hydrolysis of polyvinyl acetate. The final product contains 12% of the acetyl groups present in the polyvinyl acetate. The patent gives examples of leuco-ester colors printed with addition of thiodiglycol and a small amount of sodium nitrite.

FLOCK PRINT——The outstanding feature of this new flocking machine is the very small space it takes up. Another good point about it is that it is well enclosed and gives rise to no dust and therefore involves no loss of flocking fibers. It is so nearly automatic that it can be run by unskilled labor. It is said that it will turn out 800 to 1000 yards a day with one operator and an assistant. Like many machines of this type, it deposits the flock on the fabric, coated with the adhesive, in an electric field, assuring erectness of the fibers. Another thing that is important about this appliance is that, being of small dimensions, it can be installed in a comparatively small room, which makes it possible to condition the small volume of air economically, in order to ensure uniform relative humidity, thus avoiding irregularities in the electrical field in which the deposition of the flock takes place. Excess flock is removed from the goods by an enclosed beater, the unfixed flock being sifted and returned ot the system for reuse. (See Figure 8.)

SCREEN PRINT——A particular Italian automatic screen-printing machine consists of a solid metal bed over which is a mobile rubber blanket made on a base of metal webbing to eliminate stretch. The goods are pasted onto this blanket,

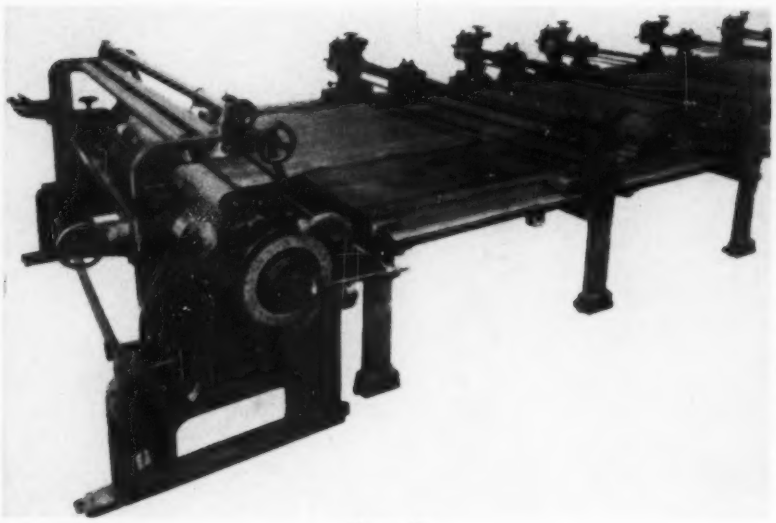


Figure 9a

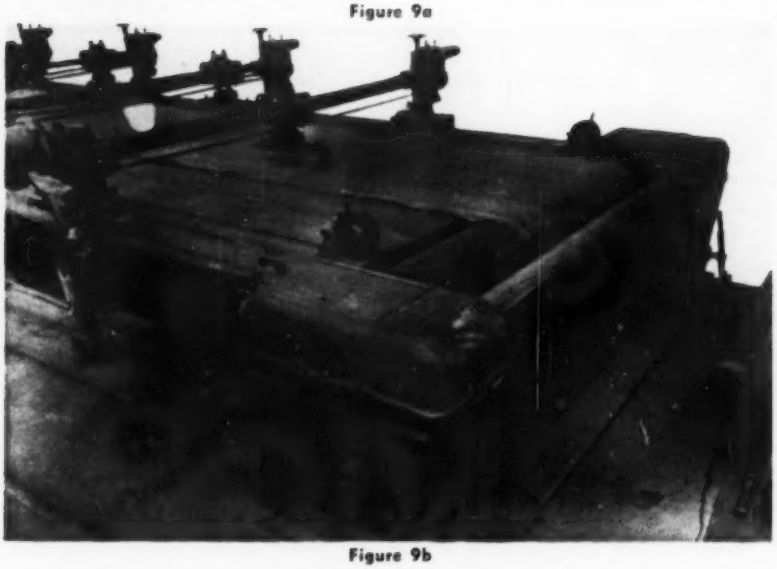


Figure 9b

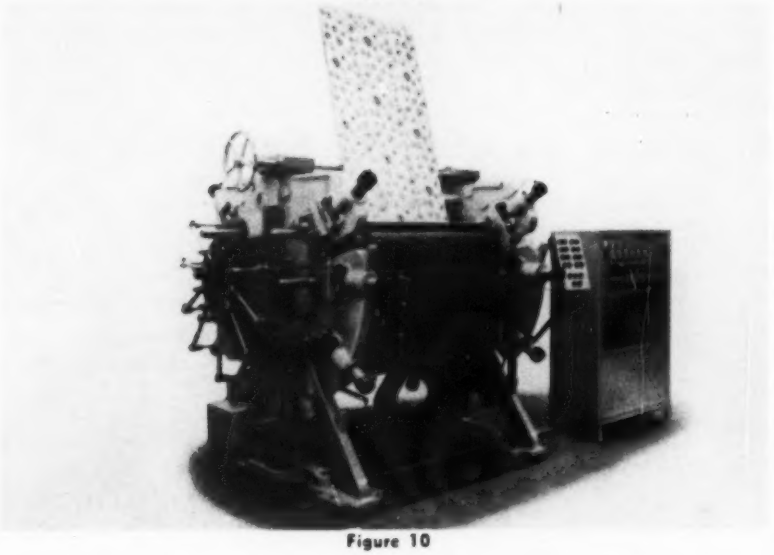


Figure 10

which passes under devices supporting the screens, which in turn move up and down. They are in contact with the goods when the printing is done by squeegees, which work automatically to distribute the color through the screen to the cloth, and they are raised when the belt carrying the cloth to be printed moves forward the required distance to receive the requisite color from the next screen. The colors are applied successively by each of the screens, using any number of colors from 1 to 10. At the end of the machine, the goods are automatically "peeled" off the surface of the belt and passed through a very rapid drying machine. In the meantime, the traveling conveyor belt is cleaned by an arrangement under the machine which scrapes off any color paste with a doctor, after which it is sprayed with water and scrubbed by rotary brushes and dried before being returned to the printing surface and having a new layer of fabric rolled on it, ready for printing. The distance traveled by the belt, between each application of color, is regulated according to the repeat of the pattern. It is said that the machine, after once having been adjusted for any particular pattern, can be run by one man with an assistant. In fact, in some cases, it is claimed that it is quite possible for these two persons to run two such machines. The squeegees and the printing screens are easily removed for changing colors and washing. The number of consecutive strokes of the squeegees is adjustable from 1 to 4 strokes; the pressure of the squeegees on the screen can be regulated to suit the thickness of the color paste, the type of pattern and the thickness of the fabric and the varying area of the color to be transferred to the fabric. (See Figures 9a and 9b.)

REMOTE CONTROL FITTING——— A celebrated constructor of printing machines has finally come out with a revolutionary improvement, which seems to have been overdue for a long time.

If this device should be universally adopted, it is likely that the printers of the future will go through life with a full complement of fingers and thumbs, as it seems to offer a decidedly safer way to fit a print pattern than the old box-gear, or fitting-gear. On the latter the changes were made by dexterously inserting the point of a tommy-bar into a small hole in the side of the gear, and turning it this way or that, in order to advance or retard the roller to put it into registration with the other rollers of the pattern. It was a difficult and dangerous operation.

By means of this invention, it is possible to accomplish this fitting with safety and, it would also seem, with more exactitude and more speedily. It was necessary to slow down the machine to insert the tommy-bar, although we knew a great many printers who could do this

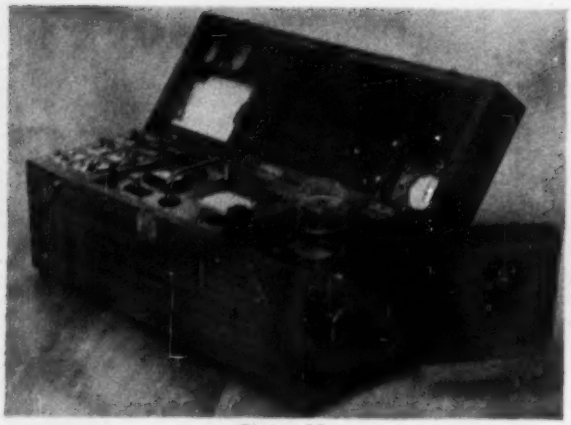


Figure 11a

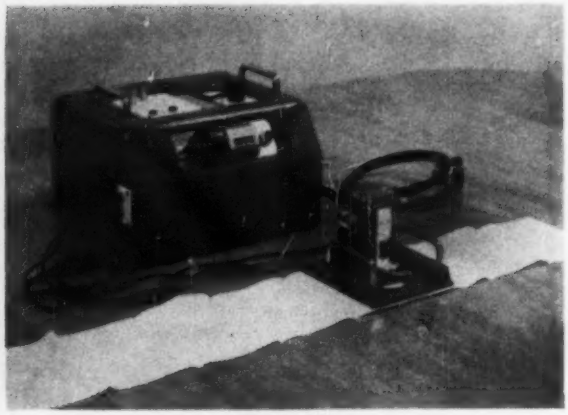


Figure 11b

at a speed at which we could not even see the details of the fitting gear.

All that is now necessary is only to push one button or the other on a panel that has two buttons for each roller in the pattern, and the roller is advanced or retarded at will. (See Figure 10.) Undoubtedly one advantage of this system is that the printer can keep his eyes continuously on the printing goods, as the control board can be conveniently placed so that he does not have to leave his working place.

Another advantage that is claimed for this attachment is that only two sets of gears are needed for the ordinary range of different-size rollers. With the old box gears, more variety than this was usually required.

It looks to be a time saver too, as it should not be necessary to slow down to adjust the fit, which has to be done with the old-type fitting gears.

It is said that this attachment can be fitted to existing printing machines.

FINISHING

ANTIFLAME FINISH———As we go to press comes word of a new method of finishing cotton and rayon goods, appropriately described as an "Anti-Flame" finish, which is based on the findings of research carried out by the Southern Regional Laboratory of the US Department of Agriculture. The latter organization has referred to it as THPC. It was announced that the two companies involved in this new application, in England, were preparing to grant licenses to interested finishers.

RADIANT HEAT CURING ——— A new infrared heater consists of two parallel plates situated on each side of the cloth to be treated. It is said to be capable of producing temperatures up to 1000°F. For curing, heat setting, fusing, coating and fixing embossing on textile fabrics, paper and plastics, it is a very flexible piece of apparatus. It is said to be so made that line fluctuations do not affect accurate regulation of temperatures. When the machine with which it is being used (tenter, dryer, etc) stops, the plates are moved apart and the current is cut off so that no damage to the cloth occurs.

TESTING METHODS

ABSORBENCY TESTER———An apparatus for determining the rate of spread of a drop of water on a textile fabric, on paper or on any other surface was patented recently by the Bleachers' Association and F L Barrett, head of their research laboratory. (Figures 11a and 11b.)

At the instant that a drop of water or other liquid is dropped on a spot on the cloth to be tested, a stop watch or other type of counter is automatically started. When the water has spread to the extent that it reaches the terminals of an electric circuit, contact is broken immediately and the counter is stopped. The elapsed time can be read and compared with other trials made on the same cloth or on other types of samples.

One filling of the reservoir on the device suffices for a great many trials, so that experiments can be made in minimum time. The hazard of human control of the starting and stopping of the timing apparatus is eliminated and optimum results are obtainable.

GENERAL CALENDAR OF COMING EVENTS

AMERICAN SOCIETY FOR TESTING MATERIALS

Feb 27-March 2—Committee Week, Hotel Statler, Buffalo, N Y; Mar 13-16—Spring Meeting of Committee D-13 on Textiles, Warwick Hotel, New York, N Y; June 17-22—59th Annual Meeting and 12th Apparatus Exhibit, Chalfonte-Haddon Hall, Atlantic City, N J; Sept 16-22—2nd Pacific Area National Meeting and Apparatus Exhibit, Hotel Statler, Los Angeles, Calif; Oct 16-19—Fall Meeting of Committee D-13 on Textiles, Warwick Hotel, New York, N Y.

THE FIBER SOCIETY

Spring Meeting—May 2-3, The Clemson House, Clemson, S C; Fall Meeting—Sept 6-7, Warwick Hotel, New York, N Y.

NATIONAL COTTON COUNCIL OF AMERICA

7th Annual Cotton Research Clinic—Feb 15-17, Pinehurst, N C.

PERKIN CENTENARY

May, 1956—London, England.

PERKIN CENTENNIAL

September 10-15, Waldorf-Astoria Hotel, New York, N Y.

PHI PSI FRATERNITY

Annual Meeting—April 19-21, Alabama Polytechnic Institute, Auburn, Ala.

PLANT MAINTENANCE & ENGINEERING CONFERENCE

Jan 23-26—Convention Hall, Philadelphia, Pa.

THE QUARTERMASTER ASSOCIATION

Annual Convention—Oct 27-28, Conrad Hilton Hotel, Chicago, Ill.

QUEBEC SECTION, CANADIAN ASSOCIATION OF TEXTILE COLORISTS AND CHEMISTS

Dec 10, Jan 21, Feb 18, Mar 17 (McGill Univ, Montreal, Que); Apr 20-21 (Annual Meeting, Sheraton Mt Royal Hotel, Montreal); June 16 (Annual golf tournament).

SOUTHERN TEXTILE EXPOSITION

19th Exposition, Oct. 1-5, Textile Hall, Greenville, S C.

TEXTILE RESEARCH INSTITUTE

1956 Annual Meeting—March 22-23, Hotel Commodore, New York, N Y.

TEXTILE TECHNICAL FEDERATION OF CANADA

5th Bi-annual Textile Seminar—June 5-7, Queen's Univ, Kingston, Ont.

Proceedings of the
American Association of Textile Chemists and Colorists

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DECEMBER 5, 1955

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AATCC Newsgram

December 5, 1955

RESEARCH NEWS IN GENERAL

Eugene W K Schwarz, at the November 17th meeting of the Executive Committee on Research, reported that the National Research Advisory Committee has considered approximately 75 different ideas for future Association research activities. These have been evaluated and many have been referred to proper committees for action. . . . Among the suggestions were studies of automation in the textile wet-processing field, and the possibility of staff members making a color film of AATCC research activities at Lowell. On the latter subject some preliminary plans are being made. . . . Plans for the AATCC wing in Lowell Technological Institute's future research building—in terms of what the Association will need —are being worked out. . . . ECR has reported to Council that it is planned to add new research personnel at the Lowell labs. Corporate Membership Committee reports the revised suggested dues schedule is being instituted now for current corporate members, and, of course, is being applied to new memberships, which continue at a "consistently good" pace. . . . ECR is considering the possibility of operating another all-day research meeting in New York.

AT RESEARCH HEADQUARTERS

The third preliminary trial run in the Shrinkage in Tumble Drying study has been completed. Laundering procedure was carried out at Good Housekeeping Institute, and dimensional change measurements were made at Lowell. Tabulated results have been sent to John Warner for his committee's analysis. . . .

At the request of the Committee on Simplified Control Tests the AATCC Laboratories have prepared six sets of test specimens from a group of 16 fabrics previously used by the Committee on Dimensional Changes. An inter-laboratory study of shrinkage resulting from six consecutive washings on these fabrics is underway by three laboratories; AATCC at Lowell, United Merchants at Lowell, and J C Penney in New York. . . . The replacement of the regular rubber gaskets by neoprene gaskets in the Launder-Ometer metal tubes has been found satisfactory by the AATCC Research Laboratories. This has been reported to the Committee on Washfastness for consideration and approval. . . . Edward Cherowbrier, of the Clothing Supply Office, Brooklyn Navy Yard, visited AATCC labs recently, and spent much time discussing test methods and examining Operation Cue atomic-explosion test panels. . . . A delegation of 25 Spanish and Mexican textile engineers, chemists, management officials and labor representatives, visiting the U S under the auspices of the International Cooperation Administration, included Lowell Tech and AATCC headquarters in their tour. Dr Chapin, conducting them through research headquarters, explained AATCC functions and purposes.

RESEARCH COMMITTEE NEWS

An overall (correlating) committee to review research test procedures and check and correlate methods, will be appointed. . . . Name of the Durable Finishes Committee has been changed to Committee on Evaluation of Creasing Characteristics of Fabrics. . . . Changes in chairmen of six TCR committees will be submitted for ECR consideration in January. New chairmen must be appointed for Committees on Resistance to Abrasion, Stream Pollution, Colorfastness to Wet and Dry Pressing, Antimicrobial Agents, Identification of Finishes on Textiles, and Flammability of Clothing Textiles. . . . The Committee on Crocking has been reactivated, it was announced at the recent ECR meeting. . . . Helen G Sommar, of B F Goodrich Co, Avon Lake Experimental Station, has been made a new member of the Drycleaning Committee.

AATCC CALENDAR

COUNCIL
Jan 20 (Hotel Statler, New York, N Y); Apr 20 (Philadelphia, Pa); June 15; week of Sept 10th (New York, N Y); Nov 16; Jan 18, 1957.

NATIONAL CONVENTIONS
Sept 13-15, 1956 (Waldorf-Astoria, New York); 1957 (Boston); 1958 (Chicago); 1959 (Washington, DC)

HUDSON-MOHAWK SECTION
Jan 20 (Jack's Restaurant, Albany, NY); March 16 (Hotel Johnstown, Johnstown, N Y); May 18 (Ladies Nite); June 22 (Annual Outing).

MID-WEST SECTION
Feb 11 (Bismarck Hotel, Chicago, Ill); May 5 (Plankington Hotel, Milwaukee, Wis); June 16 (Outing—Browns Lake Resort, Burlington, Wis)

NEW YORK SECTION
Jan 27, Feb 24 (Hotel Delmonico, New York, N Y); Mar 23, Apr 27, May 18 (Kohler's Swiss Chalet, Rochelle Park, N J).

NIAGARA FRONTIER SECTION
Jan 20 (U S); Mar 3 (Canada—meeting to be held in conjunction wtih Ontario Section, CATCC); Apr 27 (U S).

NORTHERN NEW ENGLAND SECTION
Dec 9.

PACIFIC SOUTHWEST SECTION
Feb 6 (Gourmet Restaurant, Beverly Hills, Calif).

PHILADELPHIA SECTION
Jan 13 (Drake Hotel, Philadelphia); Mar 3 (Adelphia Hotel, Philadelphia); Apr 20 (Benjamin Franklin Hotel, Philadelphia); May 18 (Annual Outing)

SOUTH CENTRAL SECTION
Dec 10 (Hotel Patten, Chattanooga, Tenn).

WESTERN NEW ENGLAND SECTION
Dec 16 (Rapp's Restaurant, Shelton, Conn)

ACTIVITIES OF THE LOCAL SECTIONS

NEW YORK———A meeting of the New York Section was held on Friday evening, November 18, 1955 with Edmund A Leonard, vice chairman, presiding in the absence of John H Hennessey, chairman, who was unable to be present because of illness. Harry Moore, Fair Lawn Finishing Co, and Percy J Fynn, J C Penney Co, were elected councilors. A panel discussion of dyeing and finishing was held with the following as members of the panel: Lewis T Kelly, Bellman Brook Bleachery Co; Carl H Brubaker, Standard Bleachery & Printing Co; Eric O Appeltofft, Alexander Smith, Inc; John H Fletcher, E I du Pont de Nemours & Co, Inc; and Percy J Fynn, J C Penney Co. The moderator was Donald E Marnon, American Aniline Products, Inc. The meeting originally scheduled for February 24th will be held on March 2nd with a discussion of "Operation Q" presented by Charles W Dorn, Harold M Stiegler and Percy J Fynn. The attendance was 175.

* * * * * *

MID-WEST———The Fall Meeting of the Mid-West Section was held in the Bismarck Hotel, Chicago, Ill, on Saturday, October 29, 1955. In the afternoon the following candidates for office in 1956 were presented by Eric Camp for the Nominating Committee:

Chairman———Arthur I Hultberg
Vice Chairman———Samuel M Littlejohn
Secretary———Warren B Broadbent
Treasurer———Kenneth M Harms
Councilors———L B MacFarland, J Gordon Scott, Eric W Camp
Sectional Committee———Francis J Connolly, Otto H Grulke, Reinhold Kriewall, John Nerl

Jack G Kelley was appointed chairman of the Publicity Committee; John L Eich, chairman of the Corporate Membership Committee; and Elliott Morrill, chairman of the Scholarship Committee. F Harry Proudfoot was appointed chairman of the Committee on Stream Pollution to replace C Fred Gurnham, resigned. The Outing Committee reported choice of Brown's Lake, Burlington, Wisconsin for the outing of June 15 & 16, 1956.

In the afternoon, Hans Seifert of Sandoz Chemical Works, Inc, spoke on "Some Aspects of the Newly Developed Cryptoanionic Surfactants." After dinner, Edward V Burnthall of the Research Department of The Chemstrand Corporation spoke on "Considerations in the Dyeing of Acrilan."

Eighty-seven members and guests were present.

* * * * * * *

PHILADELPHIA———Fred Fortess, manager of the Dyeing & Finishing area of the Applications and Product Development Department of the Celanese Corp of America at Summit, N J, will speak on "Arnel — 1956" at the next meeting of the Philadelphia Section on January 13th at the Drake Hotel, Philadelphia.

At 6:30 pm, prior to dinner, a color motion picture film, "Corrosion in Action," will be presented under special arrangement by the Corrosion Engineering Section of The International Nickel Co, Inc. The film is a graphic explanation of corrosion and how to control it.

The new officers of the Section will be installed at this meeting.

* * * * * *

EMPLOYMENT REGISTER

This column is open for two insertions per year, per member, without charge. Blanks can be obtained from, and filed with, the Secretary of the Association, Post Office Box 28, Lowell, Mass. It is understood that these will be open to inspection by prospective employers who can obtain further information from the Secretary.

55-31

Education: BS, textile chemistry and dyeing.

Experience: textile chemist; salesman, finishing agents, resins, silicones; dyer.

Age: 34; veteran, flying officer; married; references; position in laboratory or sales, near Boston, preferred.

11-21, 12-5

55-32

Education: BS with honors, textile chemistry and dyeing.

Experience: chemist.

Age: 34; married; references; position in research and development desired, location not restricted.

11-21, 12-5

53-33

Education: BS, textile chemistry, dyeing and finishing.

Experience: laboratory chemist with mill contacts.

Age: 27; single; references; position as textile chemist desired, in vicinity of New York City.

11-21, 12-5

1955 National Convention——

PROCEEDINGS OF THE 1955 OLNEY AWARD LUNCHEON*

INTRODUCTORY REMARKS

Herman L. Steen: Ladies and gentlemen, we wish to take this opportunity on behalf of the 1955 National Convention Committee to bid you all a very, very hearty welcome. It is gratifying to know that so many are interested in what we consider one of the highlights of the Convention—the Olney Award Luncheon.

As you have looked at the head table, no doubt you have been wondering, "Who are the important and illustrious gentlemen seated there?" So we will not keep you in suspense any longer.

I have the pleasure of introducing our president, Raymond W Jacoby, winner of the Olney Medal in 1951, who will introduce the gentlemen at the head table. Mr Jacoby.

* * * * *

Raymond W Jacoby: Thank you, Mr Steen.

I will mention those at the head table except those from whom you will hear later.

I am very sorry to say that George Baxter, vice president, Central Atlantic Region, is quite ill and cannot attend. We regret it very much. He is the one missing member of our national officers who is unable to be with us.

(Mr Jacoby thereupon introduced in order William D Appel, winner of the Olney Medal in 1954; Albert E Sampson, treasurer; George L. Royer, 1950 Olney Medal winner; Roland E Derby, 1953 Olney winner; Charles A Seibert, 1949 Olney Medal winner; Milton Harris, 1945 Olney Medal winner; Werner von Bergen, 1952 Olney Medal winner; Fred V Traut, 1955 Convention chairman; George O Linberg, vice president, New England Region; Joseph H Jones, vice president, Western Region; Samuel L Hayes, former vice president, Southern Region; Harold C Chapin, secretary; Richard R Frey, assistant secretary; Walter M Scott, vice president, Southern Region; Leonard S Little, chairman of the Executive Committee on Research; and Harold W Stiegler director of research).

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Herman L. Steen: Thank you, President Jacoby.

No doubt you have noticed on your program, the name of Elliot Broadbent, who will tell you more about our Medalist. It might be interesting for you to know what sort of a speaker we have selected for this particular occasion.

On Wednesday I received a special delivery letter from Mr Broadbent which stated: "Hurricane Ione is on its way. We are afraid we can't get there, so will you please be prepared to read the speech?"

We are certainly pleased to realize that a fellow who was so far-sighted as to take a thing like that into consideration should be with us. What he did not realize was that we had received earlier a telegram from the Piedmont Section stating that they all had gotten together and had blown the blamed thing out to sea, so there was nothing for us to worry about.

Ladies and gentlemen, at this time it gives me great pleasure to introduce Elliot Broadbent, manager of the Glenlyon Print Works, Mr Broadbent.

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* Held in the Rutland Room, Haddon Hall Hotel, Atlantic City, N J, at noon, September 22, 1955 with Herman L Steen presiding.

MILES A DAHLEN—THE MEDALIST

ELLIOT BROADBENT
Glenlyon Print Works

WHEN I learned of the selection of Dr Dahlen to be the recipient of the 1955 Olney Medal Award, I knew that the Committee had made a splendid choice. I looked over the roster of the recipients of this Award in past years. Most of the winners of the Medal I have known personally for a great many years. Besides having met the necessary qualification of having performed outstanding achievement in the field of textile chemistry, they all had certain other qualities in common. The qualities to which I refer are: first, curiosity not only in the line of their chosen endeavor, but also for all things that surround us in every day living; and secondly, a tremendous enthusiasm both for their daily tasks and for their community life and their various avocations. In all cases you will note an unbounded interest on their part in everything that touched their everyday lives.

Miles Dahlen is no exception. Besides having made his mark in the field of dyestuffs and chemistry, he has always shown a keen interest in local, national and world affairs, and a similar inteerst in education in general, but particularly along the lines of chemistry and chemical engineering. He has always demonstrated a willingness to help and further church work, regardless of the denomination. His interest and participation in athletics of all kinds was simply amazing. I say "was" because, at the present time, his participation in athletics is mostly confined to those that can be dealt with in a sitting position.

Miles was born January 4, 1904, in St. Paul, Minnesota. He received a Bachelor of Science Degree in chemical engineering from the University of Minnesota in 1924 and his PhD in organic chemistry from the same institution in 1928. At that time there appeared to Miles to be two conditions which should be taken care of at once, and being a forthright man, he followed through with what he felt was the proper order of importance. First, he married Marion C L Boyne of Stillwater, Minnesota, in June, 1928. Secondly, he decided to go to work. While studying for his doctorate at the University of Minnesota, he had obtained a Du Pont Scholarship. Therefore, it was quite natural that he should go to Du Pont to work.

He first worked as a research chemist at the Company's Jackson Laboratory at Deepwater Point, New Jersey. He was made division head of the laboratory in 1932, and in 1938 he was transferred to the Organic Chemicals Department's Technical Laboratory at Deepwater Point as assistant laboratory director. In 1946, he was appointed assistant director for domestic sales of the Dyestuff Division. In February, 1949, he became director of sales of the Fine Chemicals Division, and later became director of sales of the newly created Dyes and Chemical Division in 1952. In 1955, he was transferred to the Technical Division as advisor for dyes, intermediates and related chemicals.

While I had known that Dr Dahlen had written numerous articles for technical journals, and had been granted several patents, I had no idea how extensive his work on these lines had been. His articles have dealt with subjects as varied as "The Use of Hydrogen Peroxide for Sterilizing Milk" to

"The Effect of Dyestuffs on Temperature Rise of Fabrics." Of course many deal with the chemistry of dyestuffs and their application. The list of patents which have been granted to him personally or in which he has collaborated with his associates is too numerous to describe here, but let me say that the total is well over seventy.

You can almost see that in writing or participating in the writing of so many patents he would have kept busy during his full lifetime without participating in any further endeavors. However, during his time at the technical laboratory, he also made tremendous contributions to the work on the development of pad-steam dyeing, also in the work of high-temperature dyeing of synthetic fibers.

He also worked during the war on the coloration of protective clothing and the development of smoke colors.

After looking over his tremendous contributions to the dyestuff and textile industries, you would expect to find a man who worked, ate, and slept only, and who had no time for any of the pleasures of life. This is far from the case. Miles simply gets into everything with a tremendous amount of enthusiasm and exuberance. As I said before, he has been an ardent sportsman and today enjoys golfing, boating, fishing, and baseball. And I understand that he is an ardent do-it-yourself advocate. According to Mrs Dahlen, he can do anything around the house from fixing leaks to actually building a playroom. He is a member and former chairman of the Brandywine Hills Community Association. He is a devoted family man and has three sons, one with Du Pont's Textile Fibers Department; the second was graduated recently from the University of Delaware and is with the Esso Company; and the youngest son is in his second year at Delaware.

So far as we have been able to find out, there have been only two things on which the Dahlens as a team have failed. It seems that Miles has never learned to dance, in spite of the appeals of his wife and family. Miles simply refuses to take any part in what he considers wasted energy. The other failing seems to be on his wife's part. Apparently Miles sets himself up as an epicure and criterion of Swedish meatballs. After 27 years of marriage and after using every known recipe, his wife Marion has finally come up with a recipe for meatballs which satisfies Miles' critical taste. This became a major problem in the household and it was finally decided that, from each batch, Marion would cook up one meatball to see if it satisfied her master's taste. The remainder of the meat was then put into the freezer. Finally, Marion wanted to know what was to be done with all this uncooked meat. With Miles' dyestuff training, he had a ready answer, and that was to take all of the meat from the various experiments and blend them together just as a dyestuff manufacturer would so many lots of dyestuffs. After this blending took place, it was discovered that the perfect meatball had been invented. Unfortunately, no one knew exactly how to reproduce this strange blend. Apparently it is not going to prove to be any great problem, as this blending yielded sufficient meat to make meatballs for the Dahlen family for many years to come.

Possibly one of the more interesting of Miles' activities centers around his summer place in Polecat Hollow. Some years ago Miles and a number of friends purchased a tract of land on the Elk River. This they christened Polecat Hollow. It was only natural that this group should immediately elect Miles as "honorary mayor," which position he had held from that day on without benefit of further elections. From all accounts, he has administered the affairs of Polecat Hollow as a beneficent autocracy, and apparently his constituents have remained happy in this administration. Here Miles spends all his summer vacations and weekends pursuing his favorite sports of fishing and boating. He is an ardent fisherman, and asks for nothing better than to pursue this pastime during his vacation days. In the evening, he prefers to relax at the bridge table, at which he is quite an expert.

I can't remember how many years I have known Miles. Unfortunately most of my meetings with him were of a comparatively short duration; sometimes over a drink or at dinner. One of the things that impressed me about him was his interest in the other fellow's point of view, no matter whether the discussion centered around a book, a meal, a show or technical things. He always struck me as being an excellent listener, and seemed to be more interested in listening to the other fellow's point of view than expressing his own. Almost any subject could immediately provoke an interesting discussion if Miles were present. My first real association with him was in Germany. I was a member of one of the Textile Intelligence Teams, and arrived in Germany in 1945. When my team first arrived, it seemed as though we were getting nowhere except to plain frustration. However, after being there a few days, we ran into Miles and he invited us over to his billet. With his characteristic enthusiasm and hospitality, he first plied us with some of his collection of vintage wines and then taught us the theme of all investigation teams, and that was to learn to "hurry up and wait." I think that in one evening he gave us renewed confidence in the work that we had to do. He certainly gave us reason for our existence there. I can never think of Miles without thinking back 10 years and appreciating the tremendous help he gave us at that time.

It must seem to all of us that Miles has performed virtual miracles in the field of dyestuffs and related chemistry. The rapidity with which he rose from position to position in his company is truly remarkable. However, I cannot help but feel that his most amazing attributes are his keen participation in everyday life, his gregariousness, and his love for his fellow man. Anyone reading about his many accomplishments in the scientific world would expect to meet a longhaired scientists who had lived a one-sided life. In Miles' case we find that all this work made up but a part of his busy well-rounded life.

When I think of men like Miles Dahlen and their relation to research on the one hand and practical application on the other, I think we should visualize this relationship as an inverted pyramid. The point of the pyramid at the bottom touches pure research.

Let us consider a modern application of this thought in this atomic age. Radioactivity was first discovered by Becquerel in 1896. Thomson's discovery of the electron followed in 1897. In 1898 Marie Curie isolated polonium and radium from uranium. At that point, only one person at a time was working on the problem, and there we have the apex of our inverted pyramid. Here we can visualize the effects of pure research. As knowledge became more widespread, the pyramid grew larger until finally, in the last twenty years, we have gone through the fundamental research stage to the applied research, and we now have a broad inverted base with thousands of people working on atomic projects. Now, should Madam Curie still be alive and be asked to contribute something along the lines at the top of this wide base, where at one point, for example, we are now concerned with the manufacture of atomic weapons and the use of radioactivity for producing power in industry, she would undoubtedly be completely lost and possibly would contribute nothing to our present-day knowledge. On the other hand, there are undoubtedly many people employed in lines along this broad base at the top, who know nothing

about the physics or chemistry of the idea that made their job. It is also quite possible that there are many who don't even care. However, the rare man, like Dr Dahlen, finds his mind always running back to find the causes that make things possible, and has vision enough so that his mind is also running forward to see what further developments can be made of the basic knowledge which has been acquired. It is my belief that the better the man, the broader the band in this inverted pyramid of knowledge his mind occupies.

I am sure that all of us of the AATCC realize that Dr Miles A Dahlen is a very worthwhile addition to the roster of the recipients of the Olney Medal Award.

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Herman L Steen: Thank you, Mr Broadbent, for a splendid address.

At this time, I will again call on Mr Jacoby, this time to make the presentation of the Olney Medal.

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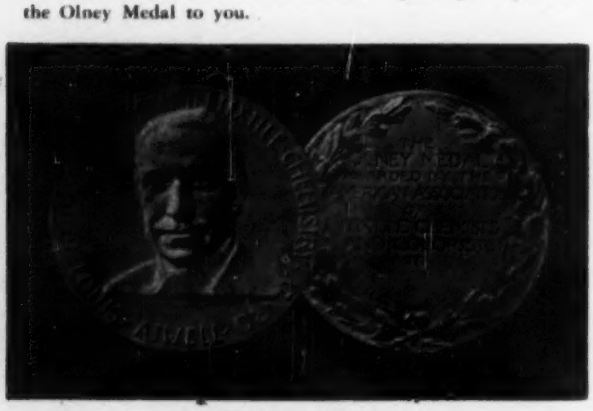
PRESENTATION OF THE OLNEY MEDAL

RAYMOND W JACOBY
Ciba Co, Inc
AATCC President

MILES A Dahlen—The industry with which we are associated has a remarkable record of progress. This has been due largely to the fact that there are within its ranks men of knowledge, men of ability, men of energy who give completely and unceasingly of their talents. The Olney Medal is awarded for outstanding achievements in this field. While it is an honor and a tribute to a deserving individual, it is also an inspiration to many others who give their best, and who otherwise might think that such service goes unhonored. We believe that you are the complete embodiment of those qualities which merit recognition.

At the start of your illustrious career, through your personal efforts, you made many valuable contributions to progress. The scope of your numerous publications and patents indicates the extent of these contributions. As your ability brought you greater responsibilities, you transmitted your ideas and ideals to those with whom you associated and exerted a guiding influence which was invaluable to them and to the industry in terms of advancement and knowledge. Like the ripples on a millpond, your influence spread in ever widening circles, inspiring countless others and arousing in them admiration for the things for which you stand and for the things which you have done. No one is more deserving.

Miles A Dahlen, it is an honor and a privilege to present the Olney Medal to you.



The Olney Medal

ADDRESS OF THE MEDALIST

"Technical Manpower and Fundamental Research—Two 'Musts'"

MILES A DAHLEN
E I du Pont de Nemours & Co, Inc

LADIES and Gentlemen:

Although the right words to say it seem to elude me, I am deeply and sincerely grateful for this honor. In accepting the beautiful and highly significant Olney Medal, I do so with the realization that it has been my good fortune to work with many fine technical men and women in the du Pont organization. You are crediting me with accomplishments that were achieved only because of their work as well as mine. In making this award, therefore, I am sure you are honoring them as well as myself.

Since receiving the surprising news that I was to be this year's recipient of the coveted medal, I have spent considerable time thinking and actually worrying about the topic I could discuss on this occasion. I finally decided to depart from the customary review of past and current technical work and to review briefly with you two subjects which I believe are extremely important to the future of all of us, namely, technical manpower and fundamental research.

As a background, I know we all agree that Americans are enjoying the highest standard of living and probably the most prosperous period of all history in this country and elsewhere. One of the most important reasons for our prosperity is the tremendous progress of our technical "know-how." Our ability to maintain and continually improve the well-being of all of our people is highly dependent upon continuance and extension of our technical progress.

We must not forget that our competitive economic system is an extremely strong force requiring ever-increasing technical work in our industries. Our domestic organizations prosper or fail largely on the basis of the success or failure of their technical activities to meet domestic technical competition. We also must not forget that the post-war recovery, especially in Europe and Japan, has reached the point that our technical workers are in sharp competition with highly competent technical workers abroad. We must remember that our foreign competitors have access to raw materials at roughly the same costs as our own, basic scientific and technical data are equally accessible to them and to ourselves, and most of them have plenty of workers not much different from our own American labor. Despite this apparent equality, our workers enjoy wages and salaries several times as high as their foreign counterparts. We all know that our standard of living must be maintained and continue to improve or our free political system almost certainly will succumb to some of the foreign ideologies. We must continue to pay higher wages and still meet competition from abroad, and our so-called "protective" tariff offsets only a small fraction of the wide differentials in labor costs. To maintain our position, therefore, we must be ever-increasingly strong *technically*, in research and development, engineering, production, and sales.

This brings me to the first major subject—technical manpower. We continually refer to "organizations" meaning teams of individuals. We should never forget that an organization is only an assembly of individual human beings, each of whom has his own talents and characteristics. Every activity begins with a thought in the mind of some *one* human being which he puts to work. Of all the resources we possess, the most precious is the creative thinking of our individuals.

While it is true that the enrollment in our colleges, universities, and graduate schools is very large, it is shocking to realize that the enrollment in the technical schools in the Soviet Union is reported to be greater than our own. The thirst for advanced technical training also is exceptionally high in resurgent West Germany. Many of their students are working long hours at low pay in menial occupations in order to secure a good education. They will be very serious technical competitors in the years to come.

We also know that the student bodies of our higher institutions of learning are selected from those who can meet minimum entrance requirements and who also can secure the financial means from their parents or from the limited scholarships now available. It is reported that the Russians are seeking out the exceptional brains among their younger people and are making sure that they receive advanced education by direct government support. I am sure that we do not want such a system in this country, but I do believe that a much more serious effort should be made to be sure that our exceptional students are given the opportunity to secure an advanced education. We must not waste the talents of these exceptional high school students!

We meet as an association of textile chemists and colorists. This formal term, of course, includes organic chemists, physical chemists, physicists, textile engineers, mechanical engineers, and many other people of advanced training. All of us should be very much concerned over how few of our talented younger people are entering into studies which will provide the technical men needed in *our* fields in the future. The textile industry is an old industry, and little has been done to attract the student to its opportunities in the years when he is choosing a career. In the relatively recent past the various branches of chemistry did intrigue the youngster. If we look back, many of us remember that toy chemistry sets, high school chemistry laboratories, homemade Fourth of July fireworks, and other fascinating aspects of chemistry were responsible for our entering this profession. Similarly, many of our engineers chose that profession because of tinkering with automobiles and other gas engines, playing with electrical toys, constructing "ham" radio sets, and similar occupations in their youth. Today, the chemical and engineering professions and industries are mature and gradually are being taken as much for granted as the textile industry. They are losing their glamor in the young minds. The youngsters of today are intrigued by the wonders of the atom and look to the utilization of atomic power and the highly publicized applications of the chemistry and physics of the atom as their great opportunity. Likewise, the aviation industry is fascinating to many of our young people; and electronics, automation, and other designations of growing fields of technical application are attracting increasing numbers of college students. Business administration also seems to be attracting an abnormally large fraction of college students. We need management talent but only in proper ratio to successful businesses requiring management.

We must take definite steps to stimulate the interest of young people in our sciences and industries. Some activities along this line have been started by technical and trade associations and large industrial organizations. However, I believe it is a necessary and proper function of the AATCC to enter into a broad program of attracting high school students into collegiate work which will train them for our industries. The brochure, "Careers in Textiles through Chemistry," now in preparation by the AATCC is an excellent start. Highly satisfying and profitable careers do await the talented youngsters who enter our professions, but they must be told about it!

An inseparable part of this problem is our supply of competent teachers of science. There are growing and disquieting reports of a deterioration in the quality of science teaching, especially in the high schools. Some of the chemistry and physics courses are said to be taught part-time by teachers trained in English, mathematics, and other unrelated fields. We can hardly expect to inspire the interest of students in the natural sciences under such conditions. Much needs to be done to secure more good science teachers at the secondary school level. The levels of compensation must be increased, and the teachers must be supplied with good material to hold the interest of themselves and their students. Our association can contribute much to the solution of this problem.

Now, to the second subject—fundamental research. Much has been written and spoken about this subject in recent months. Perhaps some of you read the article in *Fortune*, which was hardly complimentary to American industry, on the question of basic vs. applied research. I believe that American science and industry has proved itself the most able in the world in converting basic scientific information into manufacturing processes and finished products for mass use by its people. Obviously, we are highly efficient in our manufacturing and distribution techniques, otherwise we could not possibly support our wage scales in comparison with the rest of the world. However, I am sure that there is more than a little truth in the accusation that we do not do our share of developing the basic information on which our modern industries are founded. The very important contributions of research workers in the fields of pure science are probably more widely recognized in the European countries than in the United States. Apparently a greater proportion of their talented scientists are attracted to pure research rather than to commercial applications than is true here, perhaps because of both compensation and public recognition. In the very necessary matter of compensation, our research workers in the universities and research institutes, as well as our teachers, are poorly paid compared with technical workers in industry.

There are many who believe that so far as the sciences with which our textile and related chemical industries are concerned, the exploitation of present basic knowledge is reaching the point of diminishing returns. The well of basic information is running dry and we need more new fundamental work if we are to look forward to a prosperous future. To illustrate this problem, I should like to review a few examples of basic research leading to important commercial developments.

Perhaps the most spectacular example is the current application of nuclear physics. The Curies were pioneers in the study of radio-active elements. Einstein was interested in the relationship between energy and mass, almost entirely on highly theoretical mathematical grounds. Lewis, Langmuir, Bohr, Sommerfeld, and many others were interested in the structure of the atom, energy, and other basic scientific facts. They gave little or no thought to what might be manufactured some day because of their work. To them, electrons, protons, photons, isotopes, and so on were intriguing chiefly because of their whole-hearted interest in knowing more about our universe. Nevertheless, over the span of a single generation, the basic information developed by these scientific workers has resulted in our atomic development, the magnitude of which almost staggers the imagination. Technical application of this information will certainly lead to marked improvements in our way of life and to profitable businesses.

Father Nieuwland of Notre Dame was interested in the chemistry of acetylene. He found that this simple organic

compound had an unusual type of reactivity leading to other interesting organic compounds. He and his students carried out this work solely to broaden our knowledge of organic chemistry. Nevertheless, with the results of his research as a starting point, others were able to produce neoprene, the first important synthetic rubber and one able to meet many requirements which cannot be satisfied with natural rubber. This development spurred other technical activity, creating the very large synthetic rubber industry of today. More and probably better products are still to come.

Coming closer to our own field, Carothers and his coworkers were interested in the fact that some organic chemical molecules could react with themselves or with other molecules to yield very large chemical units, designated polymers. Their work was directed toward broadening our knowledge of how and why such polymers are produced and to learn their properties, not toward the production of any particular materials for any specific end uses. Nevertheless, in the course of these studies, the observation was made that some of these polymers could be manipulated to yield fibers. All of you know how Carothers' work leading to the development of nylon has grown to a number of man-made fibers and that this industry is still in its infancy.

Carothers' work, incidentally, provides a wonderful example of the totally unexpected useful products of fundamental studies. All perfumes require a "fixative" to blend the odors of various components and to maintain an unchanging attractive odor during the gradual evaporation of the perfume while in use. The rare musk ox provided the only good fixative, expensive natural musk, until Carothers found that one of his compounds was its equal. This compound, named "Astrotone," can be produced in unlimited quantities at a cost far below that of natural musk.

You may ask why I bring up the subject of fundamental research at an AATCC meeting. My answer is that there are many areas of fundamental knowledge, far from completely explored and understood, which are important to our fields of endeavor. For example, a start has been made in determining what constitutes human comfort in wearing apparel, but this is a very small start. Clothing is one of the big three of food, clothing, and shelter necessary to our existence. Our clothing of today is constructed of the fibers that happened to be available, converted to fabrics by techniques which have been developed stepwise over the centuries. We are subjected to heat and to cold, to radiation from the sun, to wind and rain. Our bodies react to all of these physical changes and I am sure that our wearing apparel is far from ideal in keeping us comfortable. We should know more about human comfort. This involves medical, psychiatric, physical, and biochemical questions as much as orthodox textile technology.

We all recognize the always growing interest in color. The 1955 line of automobiles is a striking example of our desire for color and the increased inner satisfaction we must receive from more use of color. We all know that the colors available today often are not as durable as they should be, since many do not last as long as the products to which they are applied. I grant that considerable work has been done in the field of color physics in an attempt to understand the factors which lead to color destruction, but far more can be done using the tools of today. Out of the atomic development have come "tagged" chemical elements which can be used in the synthesis of dyes, fibers, finishes, and many other elements of finished textiles. With modern instrumentation and the use of these tracer elements, I am sure that much more can be learned about the nature of color destruction or color removal by light, heat, bleaching agents, abrasion, and other color-destroying agencies. The very troublesome static problem likewise needs much more understanding from purely scientific study. As we learn more of these basic scientific facts, we have shown by our past performance that we shall be able to put them to work in the manufacture of better textiles, garments, dyes, finishing agents, auxiliaries, and so on.

Again you may ask why I bring up this problem before the AATCC. My answer is that I believe it is the definite obligation of this organization to stimulate fundamental work in every way possible. Perhaps some of the research of the AATCC itself should be devoted to fundamental studies. Perhaps publicity should be directed toward the graduate schools of our universities to encourage research workers to attack problems in these fields. I am sure that the AATCC should offer every encouragement to those already doing fundamental work of importance to us. In this connection, and also referring again to the manpower problem, I am personally very happy over the steady growth of the Textile Research Institute and the high caliber of its scientific work. At the same time, I want to point out that the Textile Research Institute-Princeton University set-up and the Institute of Textile Technology at Charlettesville provide the only major graduate education in this country training men at the PhD level for careers in the very large textile industry. I am sure that many college professors could become more interested in the scientific aspects of our industries, with the result that some of their graduate students would take up problems in our fields and make them good candidates for careers in the textile and related industries.

Just one more thought and I shall sit down. It is very often said that only large industrial organizations can afford fundamental research. This is true as far as their own laboratories are concerned. However, every commercial organization in the industries represented in our Association is highly dependent on expanding frontiers of fundamental scientific knowledge. Just as the large organizations are taking the attitude that some small fraction of dollar sales should be devoted to fundamental research, likewise, it seems to me, this same philosophy should apply to the smaller companies. By cooperative effort, these smaller companies should be able to play a part in broadening our fields of knowledge. This can take the form of cooperative work or, alternatively, they might contribute to the research funds of the AATCC or other technical organizations or to our educational institutions. The sum of many small contributions will support a very substantial program. All organizations, large and small, carry insurance against many hazards involved in their businesses. Of all these hazards, failure of our technical economy to keep up with the world competitive situation is perhaps the greatest threat to our wonderful way of life.

Again, many thanks to all of you, and especially to those responsible for my receiving this coveted Olney Medal.

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Herman L. Steen: Dr Dahlen, it gives me great pleasure to be one of the first to offer my congratulations. I particularly wish to offer the warmest wishes of the Philadelphia Section.

It is most interesting to note that Dr Dahlen is the third member of the Philadelphia Section to receive the Olney Award. We all extend our warmest and most cordial congratulations.

In closing, I would like to thank everyone present, particularly the members of the Convention Committee, who have worked so cooperatively and diligently to make this program a success.

Thank you.

1955 National Convention——

THE PAD-ROLL† DYEING SYSTEM AND ITS APPLICATION*

C O ERIKSSON, N LANDQUIST and B MELLBIN
Rydboholm Co *AB Svenska Textilmaskinfabriken Goeteborg, Sweden*

The Pad-Roll System is a new, high-production method for open-width dyeing with substantive dyestuffs, having been invented and developed in Sweden by C O Eriksson and N D Landquist, dyehouse manager and chief research chemist of the Rydboholm Co.

After a few years of practical experience, this machine has been further developed and introduced into a number of leading European finishing mills. The first installation of the pad-roll machine is expected to be in operation in a prominent US mill shortly.

The Pad-Roll System is advantageous for other wet processing, such as desizing, chloride bleaching, caustic treatment, etc.

INTRODUCTION

WHEN we examine the dyeing process of the established continuous and semicontinuous methods of open-width dyeing with direct dyestuffs, notably the pad-steam and pad-jig methods, it is clear that, even if these methods give a relatively good penetration of the fabric, the resulting dyeings often have inadequate wet fastness. This is due to the insufficient time allowed for dye diffusion, and "ring-dyed" fibers can be detected, ie, the dye is more or less located near the outer surface leaving the center undyed.

Some types of dyes will, of course, be evenly distributed throughout the fiber within a few minutes. Such dyes, however, often have the disadvantage of also diffusing rapidly in the other direction when the textile material is brought into contact with washing solutions, ie, such dyes are only moderately fast to washing. Other types of direct dyes, having a very high affinity to the fiber, show comparatively good fastness even after short "dyeing-in" times, despite the "ring-dyeing." However, if the same amount of dyestuff would be evenly distributed throughout the fiber cross-section, better fastness might be attained. This is so because the concentration difference between the fiber surface and the surrounding solution is decreased in the latter case. Another possibility, which is not very often noted in discussions of the dyeing mechanism, is that the absorption energies at different points of the fiber are different. Thus, a cross-section analysis of a fiber would not give complete information, since an even distribution might not be adequate to maximum absorption forces: the time needed for such a maximum absorption might exceed that for even distribution.

Furthermore, for any type of dyestuff, short dyeing times limit the depth of shade and color yield to a large extent, and it is clear that maximum fastness can be achieved with each type of dye and at any depth of shade only if "dyeing-in" times roughly correspond to those employed in winch dyeing. "Dyeing-in" of the padded fabric on a roll or batch accordingly would be a possible solution to a full-width dyeing system using sufficiently long dyeing times, but there are technical difficulties. To avoid substantivity effects it would be necessary in most cases, especially for lighter shades, to pad at low temperatures unsuited for the actual dyeing process. Furthermore, the batch, immediately after the padding, must be kept under such conditions that the liquid phase will not be disturbed by mechanical movements of liquid or migration of dye in the liquor. Since the hand of the dyed fabric, and in some cases also, the optical color yield, is dependent on the tension in the fabric during the process, a low processing tension is also of great importance. The processing must be simple and give uniform dyeing results easy to match in laboratory scale. Production should be high and as nearly continuous as possible, providing for good economy with respect to both investment and operating costs.

The Pad-Roll System has been developed to meet these requirements.

DISCUSSION

PRINCIPLE OF THE PAD-ROLL SYSTEM———In principle the material is padded with dye liquor at a temperature suitable to the dye or dye mixture used. The padder pan has a small liquor content in order to further prevent disturbances due to substantivity of the dyes. After padding, the fabric is passed into a chamber in which a practically saturated atmosphere of the required dyeing temperature can be constantly maintained. Within the chamber the fabric initially meets a device for heating by means of infrared radiation to the desired dyeing temperature, without any change in the state of the liquid phase. The fabric is wound loosely on a large-diameter roll, which, after being filled up, is slowly rotated for a time sufficient to permit uniform distribution of the dye in the material. Because of the state of the atmosphere in the chamber, no change in the liquid phase of the batched fabric occurs during the dyeing-in period. After this period the cloth is removed for drying, or if required, rinsing and aftertreatment.

Based on this principle, the Pad-Roll Dyeing Machine has been developed and the method patented in most industrial countries. The final design is illustrated in Figure 1.

DETAILS OF THE MACHINE——— After passing the conventional entering devices, the cloth reaches the padder, which has been constructed to meet the special requirements of the method. As with all padders for continuous dyeing, the most important requirement is a uniform squeeze within the necessary range of varying nip pressures. In order to get as good an impregnation as possible before the fabric reaches the nip of the padder, and at the same time reduce substantivity effects by means of a rapid renewal of the dye solution, the padder pan must provide a comparatively long path for the fabric combined with a small volume. This is achieved with a displacing device, which can easily be removed for cleaning and inspection. The entire volume of dye solution is renewed within one to two minutes at normal running speeds. In order to keep the temperature

* Presented by B Mellbin on September 24, 1955 in the Viking Room, Haddon Hall Hotel, Atlantic City, N J.

† Registered trademark

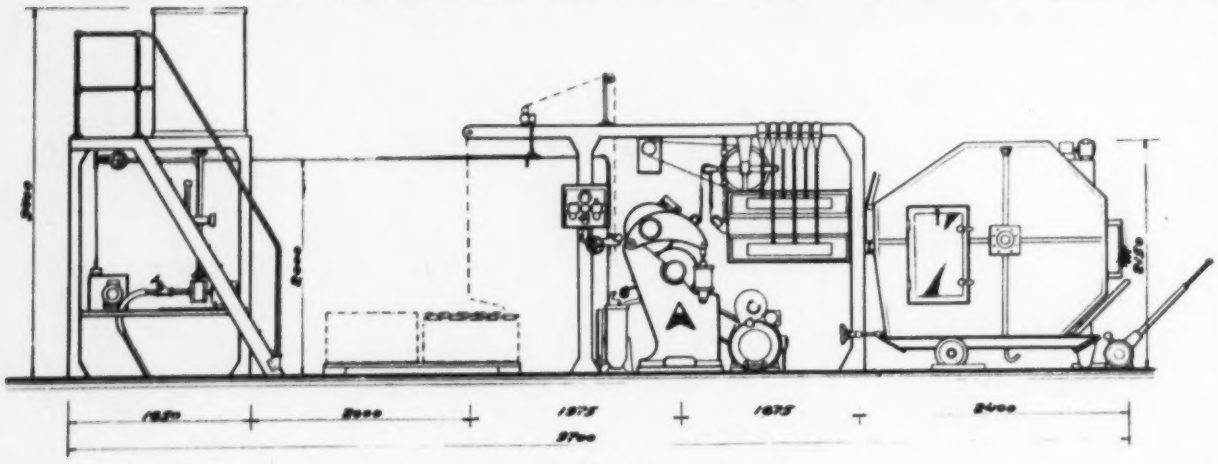

Figure 1

of the dye solution constant, the pan is equipped with a water jacket, and the water and hence the dye liquor are kept at a constant temperature by means of a thermo-regulator, which controls the amount of steam blown into the water. A constant level is maintained by means of a device regulating the flow of dye liquor from a storage tank having the same temperature as the pan.

After padding, the fabric is led over a compensator, which regulates the batching motor and cloth tension, into the horizontal heating zone, where it is heated to the predetermined, most suitable, and constant dyeing temperature. This is done by electrically produced infrared radiation acting on both sides of the fabric. The effect of the infrared heating tubes can be regulated in an appropriate way. The maximum power input is 36 KW for a machine for 40" wide cloth.

From this section of the machine the fabric reaches the dyeing chamber in which it is batched at lowest possible tension and completely without creases, so that the most delicate fabrics can be easily handled. The problems of creasing, which must be taken into consideration, especially with rayon fabrics, have been carefully studied and provision for prevention of creasing on the padder as well as throughout the entire unit has been made.

The dyeing chamber is mounted on wheels and is movable. During the time of impregnation the chamber is tightly connected to the heating zone, forming with it one room. After being filled up, the chamber is moved away, sealed and stored at any convenient place during the "dyeing-in" time. The batch is slowly rotating during this time, activated by a small motor. Another chamber is attached to the machine and a new run started during this period so that a very high and practically continuous production is obtained. When the "dyeing-in" period is ended, the chamber is taken to a dryer or to a machine for rinsing and aftertreatment.

The batch drum has a comparatively large diameter of 24" in order to give only small differences in pressure throughout the batch, so that even on rayon rep qualities and similar goods moiré effects can be minimized. The cloth can be wound up to a maximum batch diameter of 63". Based on a cloth width of 40", a maximum of 1400 lbs of dry weight rayon or 1750 lbs of cotton can be batched.

A Pad-Roll range with two interchangeable dyeing chambers at 2-shift operation will have a normal weekly production of 30-40 batches, and with 3 chambers, of 40-50 batches. Provided the batches average a load of 80%, the highest possible production per week would be 50,000 lbs for rayon, or 62,500 lbs for cotton of 36" width, respectively. Based on a cloth width of 54", the corresponding production would be 75,000 lbs and 94,000 lbs, respectively.

The machine is also well suited for processing comparatively small lots inasmuch as it allows a very fast change of dyestuff at low loss of dye liquor. Two or more successive dye lots of different shades or material are separated by adequate cloth strips (leaders) and can be rolled up to the same batch. From a technical standpoint there is no minimum size below which a dye lot cannot be run on the machine, although practice has shown that lots of 100 lbs can be set as an economical minimum.

The inner walls and parts of the infrared zone, as well as those of the chamber, are of stainless steel. All rollers in the entire unit are also made of stainless steel and mounted on ball bearings. The dyeing chambers, as well as the infrared zone, are most carefully insulated, and the outer walls are covered with aluminum sheets to minimize heat losses. In order to prevent condensation and dripping, the ceilings of the chambers and the zone are electrically heated.

As already mentioned, one of the most important necessities for the method is the ability to heat the fabric to a predetermined and nearly constant temperature, and to maintain this temperature in the batch during the dyeing-in period without any important evaporation from the batch or other disturbances of the liquor phase. It is a well-known fact that a wet material that is heated by any means will reach the wet-bulb temperature of the surrounding atmosphere and then remain at this temperature as long as it is wet. For this reason the chamber and the infrared zone, before the run is started, is filled with steam until the moisture content or wet-bulb temperature of the inside atmosphere corresponds to the required dyeing temperature. Beforehand, the chamber is preheated to a somewhat higher temperature, which will be the dry-bulb temperature of the inside atmosphere. This slight difference between wet- and dry-bulb temperature will prevent condensation on internal parts but not cause any drying effect. During the run, the energy input in the heating zone is regulated to keep the wet-bulb temperature constant or increasing only slightly (a few degrees). Both the wet-bulb and dry-bulb temperature are automatically regulated and registered on recording instruments. While the batch is afterrotating in the sealed chamber during the dyeing-in period, the dry-bulb temperature is automatically maintained

constant by an input of electrical heat corresponding to the heat losses. The wet-bulb temperature will remain practically unchanged by itself since the chamber is fully closed. Figures 2, 3 and 4 illustrate some views and details of the machine.

PRETREATMENT OF THE FABRIC ———As in all continuous dyeing processes, the pretreatment of the fabric is of greatest importance. The purpose of the pretreatment is to obtain a highly and evenly rewettable fabric and as uniform chemical and physical properties of the material as possible. From this point of view, a treatment given in open width under the lowest possible tension is to be preferred, especially for rayon fabrics. If the desizing is made by means of a malt diastase and a nonionic surface-active agent on the Pad-Roll Machine, very good results can be obtained rapidly. The use of a malt diastase, which normally has the disadvantage of being a slow process, requires only 30-60 minutes in the chamber. After this time has elapsed, it is recommended that the fabric be rinsed, preferably in an open-width washer; and in the case of rayon fabrics, of a low-tension type.

Boiling-off of cotton fabrics on the Pad-Roll Machine instead of kier-boiling has been comparatively successful. Very good results have been obtained when chloride bleaching has been done on the machine, and it is interesting to note that the corrosion problems are under control in this case. This is so since the chloride solution in the padder pan is kept cold, and the small amounts of chlorine dioxide developed in the chamber after heating cause no apparent corrosive action when all parts of the machine are made of stainless steel and a somewhat super-heated atmosphere is maintained in the chamber. Thus, the Pad-Roll Method can be used not only for dyeing purposes, but it is also a valuable tool during the pretreatment. In some cases a pretreatment in rope form can be applied successfully, but for fabrics sensitive to wrinkles this method cannot be recommended.

PADDING———When a dye is rapidly absorbed by the textile material, difficulties will arise, especially with lighter shades, from changes of concentration in the pad solution. The depth of color will change during the run. In the Pad-Roll System, such tailing effects are minimized by keeping the temperature of the dye solution low, thereby reducing the rate of dyeing. This can be done since the fabric is heated to a suitable dyeing temperature after padding, substantially without any change in the liquid phase.

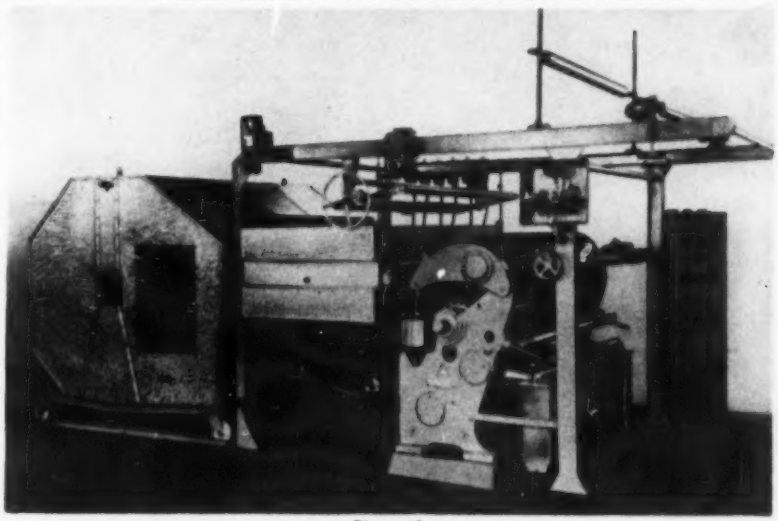

Figure 2

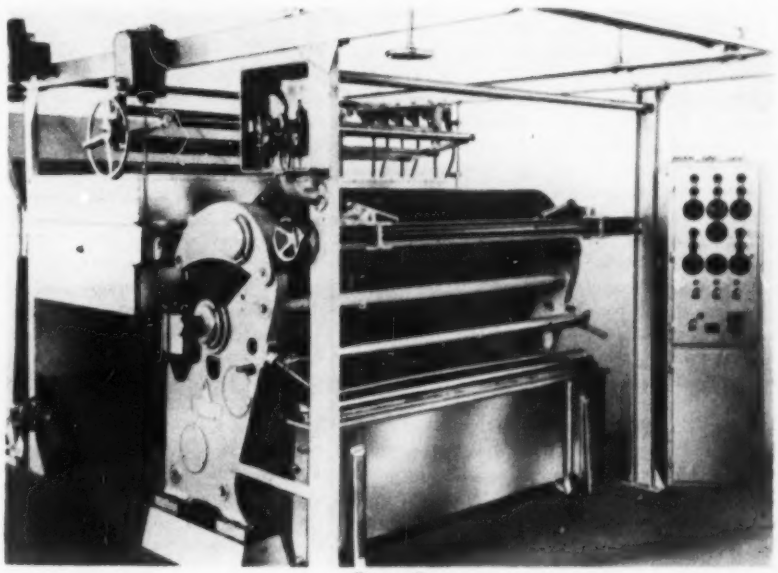

Figure 3

Despite the comparatively low temperature of padding (often about 40°C), good impregnation can be obtained, as a sufficient length of the fabric is brought into contact with the pad solution in the pan so that the rewetting time is comparatively long. As previously mentioned, the pan volume is small, thus compensating for the long time of contact, since the pad solution is rapidly consumed. This is also favored by a high pick-up and a high running speed.

A high pick-up is also favorable from another point of view, especially in dyeing deep shades, since the depth is partly controlled by the solubility of the dye. A change of pick-up from 80 to 100% will permit a corresponding increase in depth. It has been found, however, that a kind of "emulsion technique" can often be applied. The dye is padded as a dispersion, and owing to the long dyeing time available, this dispersion is brought into solution when the proportion of dye present in true solution diffuses into the fiber, ie, as the concentration of dye in the padded solution tends to decrease. From the above it is found that a high running speed is controlled by the rate of rewetting and the capacity of the infrared heating zone, the latter being a function of the weight of the fabric, the temperature of the pad solution, and the dyeing temperature to be obtained. For a medium weight, spun-rayon fabric in the machine previously described, the maxi-

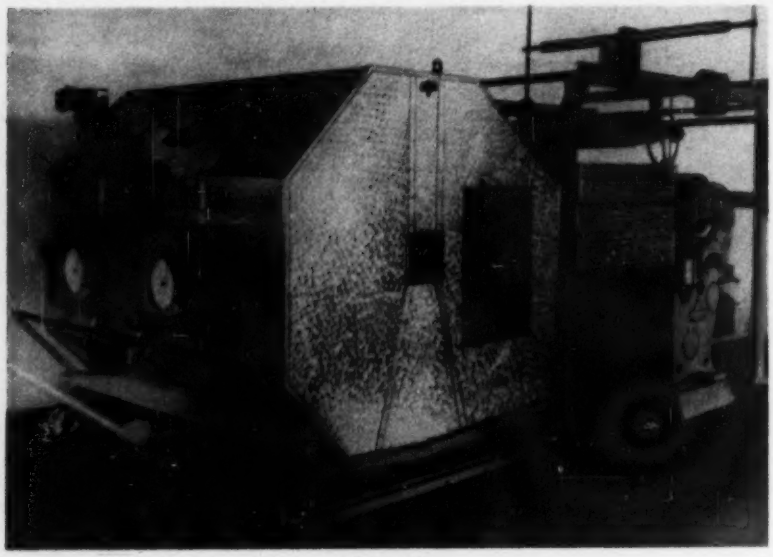

Figure 4

mum padding speed is about 70 yards per minute.

Some fabrics need a higher squeezing effect. As the pad liquor is bound to the yarn by capillary forces, an excess of dye liquor can move during the dyeing-in period. This is sometimes the case on taffetas, and will result in an uneven dyeing. A higher squeezing effect is also to be preferred when the material itself is uneven, since greater uniformity of distribution of the padded solution on the fabric is obtained. Further, the low liquor ratio decreases the tendency of dye transfer between parts of different affinity.

DIRECT DYE PAD SOLUTION——— In all dyeing processes with direct dyestuffs, including padding, the selection of dyestuff is of importance, and often only a narrow range is available. In the Pad-Roll Machine, the padded fabric is heated substantially without change in the liquid phase, and the dyeing-in period may be quite long. Therefore practically all types of dyestuffs can be used. The long dyeing-in period reduces the necessity to add electrolytes to the dyebath, meaning that comparatively concentrated solutions can be used without any difficulty. If normally the maximum depth of dyeing is controlled by the solubility of the dye, the "emulsion technique" can often be applied above this limit. Since a low electrolyte concentration often is to be used, the concentrated brands are mostly to be preferred.

An addition of electrolyte is obviously of value with a dye of low aggregation tendency at the dyeing temperature, which is very often indicated by moderate fastness figures at high temperatures, as declared by the manufacturer. If a dye is sensitive to "precipitation," no salt or other electrolyte can be added. No general comments about the use of electrolytes between these limits can be given. Experience has shown, however, that 80% of all dyes can be used without addition of any sort, even for the deep shades. If a laboratory dyeing made in order to match a shade shows that the rate of dyeing or the final equilibrium is unfavorable, further dyeings of that kind with increasing amounts of electrolytes will give the information needed for the choice of a proper pad-solution composition.

DYEING-IN PERIOD———The dyeing-in temperature depends on the dye, the composition of the liquor, and the fabric to be dyed. Generally speaking, it should be as high as possible; however, very high temperatures require more careful control of the conditions of the atmosphere in the chamber since the system becomes more and more labile with rising temperature due to the increase in heat transfer and tendency to migration.

The temperature range used in practice is, in the case of direct dyes on cellulose fibers, 75-90°C (165-195°F).

Since maximum dye absorption is obtained asymptomatically, the time of dyeing is primarily determined by the fastness required. This time varies, for direct dyes on cellulosic fibers, from one hour for pale shades to 8 hours for very deep shades. The dyeing time, however, is also to a large degree dependent on the properties of the dye used, and with some dyes maximum fastness can be obtained within one hour even in comparatively heavy dyeings.

AFTERTREATMENT———After the dyeing-in period, the chambers are moved to machines for further processing. In the case of light-to-medium depths, and frequently for deep shades, the fabric can be dried immediately after dyeing, since all dye has been absorbed. However, some dye impurities or added electrolytes sometimes make rinsing necessary, eg, when the fabric is to get a crease-resistant treatment afterwards, and these substances would affect the process.

If an aftertreatment is to be applied with a dye-fixing agent, this, as well as the rinse, can be easily done on an open-width washer, a jig, or a winch. It has been observed that a treatment in rope form does not produce the danger of wrinkling if the complete dyeing-in has been done in open width.

FASTNESS AND COLOR YIELD——— The long dyeing time makes it possible to obtain maximum fastness, and experience has proved that the same or better fastness than that obtained on a winch is a normal result of pad-roll dyeing.

The color yield, being a function of the small liquor ratio and a very good exhaustion, is better than that obtained by jig or winch dyeing. This is especially the case with deep colors, and an increase in color yield up to 25-30% has been observed.

OTHER DYES AND TEXTILES——— A great number of direct, diazo and aftercoppering dyes have been used for dyeing millions of yards of cellulose fabrics. Up to now, other dye classes and materials have been subjected to shorter runs only, and the results can be summarized as follows:

The dyeing of acetate rayon and nylon with disperse dyes has been successful. The dispersing agents, however, have to be carefully selected, though the nonionic-type, for example, seems to be generally applicable. For the application of deep colors the addition of a thickener to the pad liquor is advantageous because it will increase the solution pickup and keep the dispersion stable.

Water-soluble disperse dyes have been used for nylon with very good results.

It may also be mentioned that cross dyeing of rayon-acetate has been very successful, and the acetate reserves on rayon-acetate staple mixtures are for the most part better than the corresponding results on beck dyeing.

Finally, the results on wool with acid dyes, for instance, suggest that the pad-roll system is suitable for wool dyeing.

COLOR MATCHING ——— Since no corrections can be made during the dyeing, a simple and reliable laboratory dyeing method is necessary for any con-

tinuous-dyeing system. In the case of the Pad-Roll System, the following laboratory technique has proven to be satisfactory:

A small strip, about 6" wide and 2 yards long, is padded on a laboratory mangle with a dye solution which is expected to give the required shade. The pan of the mangle is, in principle, similar to that of the pad-roll machine, ie, the padding can be done from a small volume at the desired temperature. The speed of the padder is selected in a way so that the immersion time is substantially the same as for the large-scale run. The pressure on the rolls is chosen so that the pickup is the same as that of the production machine.

After padding, the fabric is batched on a stainless-steel tube and wrapped in a piece of plastic, eg, polyethylene sheet. The roll is then put on one of the pins of a moving wheel, which is located in a small chamber equipped with temperature controls. By means of these controls the same atmospheric conditions as in the Pad-Roll Machine can be maintained.

Within the limits needed for good color matching, a dyeing time of about one hour is generally sufficient. After the dyeing-in, the strip is treated in the same manner as the bulk of the fabric.

This laboratory dyeing technique can be applied not only for the purpose mentioned above, but also for analysis of the influence of the dyeing time on the fastness.

ECONOMICS——The economics of the Pad-Roll System are of great interest. A detailed analysis of this subject already has been made in an earlier paper presented in Zurich, Switzerland in November, 1954. The results of this analysis can be summarized as follows:

1) Superior production per manhour. Considering all manpower for the pre- and after-treatment and the intermediate drying, the costs are only 20-40% of the labor cost for the same production on dye becks or jigs.
2) One Pad-Roll unit equipped with three exchangeable chambers in a practically continuous process delivers a production which equals the production of 30-40 dye becks with ten pieces each, or that of 40-70 jigs.
3) Possibility of processing comparatively small lots, down to 100 lbs, at almost unchanged efficiency and economy. Possibility to increase the capacity to conform with higher production demands at small additional investment costs.
4) Costs for heating, including pre- and after-treatment and interim drying are considerably less than with any other method using direct dyestuffs. They are about 20-30% of the costs of the respective dye beck or jig dyeing.
5) Extremely low water consumption, 5-15% of the comparable consumption when using dye becks.
6) Optimum yield of dyestuffs. Savings up to 30% on deep shades effected by the use of long dyeing times, which can be selected at will.
7) Superior evenness and penetration and optimum fastness.

DISCUSSION

Question: **What is the cost of the Pad-Roll Machine?**

Answer: **In the neighborhood of $30,000.**

Q: **Is there any pressure at all in the in-dyeing chamber?**

A: **No pressure at all. It cannot reach a temperature over the boiling temperature.**

MEMBERSHIP APPLICATIONS

SENIOR

William T Anasovich—Chemist, Heminway & Bartlett Mfg Co, Watertown, Conn. Section: (WNE). Sponsors: M Pettit, W E Thompson, Jr.

George B Anderson—Asst head, Procurement Branch for Res & Dev, Marine Corps Clothing Depot, Philadelphia, Pa. Section: (Phil). Sponsors: H L Piligian, W R Howes.

Harry B Aylward—Plant mgr, Surpass Chemical Co, Inc, Albany, N Y. Section: (HM). Sponsors: A J Rooney, E A Chevrette.

Stephen N Burmer—Text tech, U S Testing Co, Inc, Hoboken, N J. Section: (PSW). Sponsors: W F Wigglesworth, W H Jones.

William E Farmer—Dyer, Classe Ribbon Works, Inc, Anniston, Ala. Section: (SE). Sponsors: W M Israel, A O Davis.

Lavina M Franck—Teacher, Text & Clothing Con, Univ of Calif, Los Angeles, Calif. Section: (PSW). Sponsors: J Smith, A H Roberts.

Michael J Hara—Head Dyer, Chwatt Bros, Inc, Brooklyn, N Y. Section: (NY). Sponsors: R E Milana, T Venturini.

Benjamin F Johnson, Jr—Chemist-dyer, Millville Mfg Co, Millville, N J. Section: (Phil). Sponsors: J Yates, L S Speakman.

Kington G Lay—Technician of Dyeing & Printing Depts, En Hou Dyeing & Printing Co, Ltd, Tou Yuan, Formosa. Sponsors: K Wenzel, R C Brown.

Thomas P Lee—Colorist (lab), Geigy Chem Corp, Dyestuff Div, Los Angeles, Calif. Section: (PSW). Sponsors: E B O Lindquist, A H Roberts.

Martin E Mangarelli—Head dyer, Pyramid Piece Dye, Paterson, N J. Section: (NY). Sponsors: H P Baumann, G Heine.

C Quentin Miller—Dev chemist, E I du-Pont de Nemours & Co, Inc, Deepwater, N J. Section: (Phil). Sponsors: C A Seibert, A C Stevenson.

Richard E Riley—Sales dev engineer, B F Goodrich Chemical Co, Avon Lake, O. Section: (MW). Sponsors: F Tripp, E J Dupre.

Merle W Shaw—Sales repr, Diamond Alkali Co, New York, N Y. Section: (NY). Sponsors: W A Wilson, E A Chevrette.

Anthony J Simonson—Tech dir, Borne Scrymser Co, Elizabeth, N J. Section: (NY). Sponsors: A E Raimo, J E Conway.

JUNIOR

Bobby L Holmes—Res chem, Fiber Mkt Dev Dept, American Cyanamid Co, Bound Brook, N J. Section: (NY). Sponsors: R J G Schofield, J C Leinenger.

Jacob Knup III—Management trainee, Hellwig Dyeing Corp, Philadelphia, Pa. Section: (Phil). Sponsors: A N Etchells, A V Morrell.

Virginia A VanSant—Res chemist, The Chemstrand Corp, Decatur, Ala. Section: (SE). Sponsors: T H Guion, M H Barnett.

ASSOCIATE

John M Allan—Tech sales repr, Alco Oil & Chem Co, Philadelphia, Pa. Section: (Phil).

Robert J Borgersen—Plant mgr, Roma Chemical Corp, Brooklyn, N Y. Section: (NY).

George Chiaramonte—Gen sales mgr, Gabb Special Products Div, E Horton & Son Co, Windsor Locks, Conn. Section: (WNE).

Yadalam A Setty—Director, S K S & H Mills Ltd, Bangalore, India.

CORPORATE

E F Drew & Co, Inc
The Stearns & Foster Co
Wyandotte Worsted Co

(Concluded on Page P884)

Minutes———

ONE HUNDRED AND NINETY-EIGHTH COUNCIL MEETING

THE Council held its 198th meeting in the Hotel Haddon Hall, Atlantic City, N J, on Wednesday evening, September 21, 1955. Present were President Raymond W Jacoby presiding; Joseph H Jones, George O Linberg and Walter M Scott, vice presidents; Albert E Sampson, treasurer; Leonard S Little, chairman of the Executive Committee on Research; J Robert Bonnar, Carl Z Draves, Henry F Herrmann, C Norris Raboid and P J Wood, past presidents; John P Ploubides and Robert D Robinson representing Northern New England; Edward H Gamble, Thorwald Larson and Edward W Lawrence representing Rhode Island; Rudolph C Geering representing Western New England; Bernard K Easton representing Niagara Frontier; Albert E Herrmann, Jr and Irwin J Smith representing Hudson-Mohawk; Robert C Allison, Matthew J Babey, Weldon G Helmus, John H Hennessey, Patrick J Kennedy and Paul J Luck representing New York; Carleton T Anderson, Edward C Diehl, Arthur W Etchells, Harry L Morgan, Richard A Shimp and Frederick V Traut representing Philadelphia; Lawrence L Heffner representing Washington; Harley Y Jennings, Raphael E Rupp, Henry A Rutherford and R Hobart Souther representing Piedmont; S Jack Davis representing Southeast; Eric W Camp, Samuel Klein and L B MacFarland representing Mid-West; Hubert A DesMarais representing Pacific Northwest; Charles W Dorn, chairman of the Technical Committee on Research; James A Doyle, chairman of the Publicity Committee; William A Holst of the Committee on Constitution and By-laws; Albert E Johnson, chairman of the Corporate Membership Committee; Percival Theel, chairman of the Publications Committee; K H Barnard, H C Donaldson, Jr, A I Hultberg, M J Lydon and F J Rizzo; and H C Chapin and R R Frey of the secretary's office.

The secretary's report of the 197th Council meeting and financial report of July 31, and the Treasurer's audited report for the year ended July 31, 1955, were accepted. A further loan of $1,000 to the Perkin Centennial in August was approved. Price, Waterhouse & Company were appointed auditors for Association accounts of the current fiscal year. Effective in the fiscal year begun August 1, 1954 and thereafter, it was voted that ten dollars from each Corporate membership fee be appropriated for the general expenses of the Association in connection with Corporate Memberships, to accord with new Senior and Associate membership fees. The treasurer was authorized to invest up to $30,000 additional in US bonds. He was instructed to purchase a term life insurance policy from the Savings Bank Life Insurance Council of Massachusetts, in the amount of $3,000, for each employee of the Association under 65 years old who receives compensation for 80% or more of normal working hours, and has been in employment of the Association for a year or more. The Association is to pay all premiums and receive all dividends. An employee resigning gives up all rights under his policy.

From the Board of Trustees of the Lowell Technological Institute, Dr Lydon presented an invitation to the Association to occupy executive offices and laboratories in a contemplated new building. The Council accepted this offer with thanks, signifying its intention of occupying these new quarters for at least five years, though in the event of late occupancy, not necessarily later than September, 1963.

Vice presidents Jones, Linberg and Scott reported for their respective Regions. The secretary was instructed to send greetings and hope for speedy recovery to Mr Baxter.

The Council voted to establish a committee of the Council to promote and regulate inter-society relations, to be known as "Inter-Society Relations Committee." It shall consist of a chairman (preferably an ex-president of the Association) and six members who have previously served as delegates to cooperating societies, all to be appointed by the Council and instructed by it on their duties. All AATCC delegates are responsible to this committee and shall submit written reports to its chairman on society meetings they have attended, with special reference to matters in which AATCC has an interest, a record of comments made in behalf of AATCC and of votes they have cast and decisions reached. The chairman of the Inter-Society Relations Committee will submit to the Council as frequently as may be deemed advisable a summary report of the activities of this committee during the preceding period. When the Council appoints this committee with the co-operation of ECR, the method of appointment of delegates and their duties and authorities with respect to the societies to which they are assigned will be defined. The establishment of this committee as a standing committee of the Council is contemplated but final action will be deferred until its functioning is judged adequate to warrant this step and the required amendment to the By-laws.

Mr Babey reported plans of the Subject and Speakers Bureau to establish card files of previous and possible speakers and their subjects. Information for these files will be solicited through a widely circulated letter, and will be welcome from all members of the Association, addressed to Mr Babey.

SECRETARY'S FINANCIAL REPORT—OCTOBER 27, 1955

	Applications	*Dues, regular & reinstate*	*Dues, Corporate & Sustaining*	*Miscellaneous*	*Totals*
Received & transmitted to Treasurer, August 1 to October 27, 1955	1345.00	22355.00	3250.00	3247.46	30197.46
Leaving deposited by Treasurer with Secretary					6704.11
Miscellaneous items,					
Reporters and reprints				96.10	
Year Books				320.00	
Crockmeters				737.01	
Crock cloth commissions				192.03	
Multifiber cloth commissions				679.10	
Moth cloth commissions				40.00	
Water test apparatus				198.14	
Dyed standards				26.00	
Knitted tubing				14.00	
Gas fading units				9.00	
Buttons				5.00	
Color transfer charts				195.00	
Flammability blueprints				5.00	
Analytical Methods, unbound				15.00	
Application of Vat Dyes				323.00	
Cotton skeins, commissions				9.25	
Standard grease wool				160.00	
Laboratory supplies returned for credit				167.50	
Grey scales				55.33	
Gas fading				1.00	
				3247.46	

H C CHAPIN
Secretary

Mr Doyle outlined arrangements by Mr Scanlan and himself for the convenience of the press at the convention. His Publicity Committee hoped to utilize this opportunity for a meeting of its members. A committee is to be organized for the purpose of distributing to journals other than *American Dyestuff Reporter* outstanding papers from various Association meetings (after they have been published in the *Proceedings*), or abstracts therefrom.

Mr Dorn called attention to the open Technical Committee on Research meeting at the Atlantic City convention. (This was devoted largely to reports on exposure of textiles to the atomic bomb.) Mr Johnson reported increasing contributions of Corporate members to research, predicting income of $75,000 in 1956 and $100,000 per annum within the next three years. Mr Little reported visits of the Executive Committee on Research to Lowell and to Mr Seibert's laboratory. A new form of report to Corporate members was under consideration. Wording of test methods was being amplified in detail to insure duplication of method in various laboratories. On September 6 to 8, 1956, preceding the Perkin Centennial celebration, there will be ISO meetings on Colorfastness, Shrinkage and Laundering. Monday of the Centennial week will be designated International Day, with luncheon and symposium on Light Fastness Tests.

On basis of reports from the printers and correction of proof to date, Mr Holst believed the *Colour Index* would be published late in 1956. Mr Sampson reported his committee had decided on binding in this country of copies to be distributed here.

Professor Theel reported editing completed, for the *Reporter*, of all papers except those presented at the convention. The 1955 Year Book was ready for mailing.

Mr Linberg reported organizations representing 200,000 persons and 3,000 companies to be cooperating on the Perkin Centennial celebration in week of September 10, 1956. According to Mr Traut, registration at the Atlantic City Convention would exceed all previous records.

Presented by Mr Jones for the Committee on Membership and Local Sections, each of the following was elected to the class of membership specified:

CORPORATE

Anilinas Argentinas Buzan, SACI
Atlantic Lacquer Mfg Co
Bolta Products
Bryant Chemical Corp
Burlington Engineering Co, Inc
King Philip Finishing Co
Marubeni Company (New York) Inc
The Pond Lily Co
South Florida Test Service
Union Textile Printers, Inc

SENIOR

A L Allewelt, L W Baines, J B Batdorf, O A Billups, R J Bray, G H Brewin, J D Bussey, Y A Cerf, R W Cobb, J J Cramer, H G Curran, R Daniels, J R Duggins, H P Ebert, W Eikoetter, C Elmendorf, E G Evans, A S Endler, M M Fein, P Feldmann, A Fischer, G C Frank, H R Gadi, J E Gannon, S Goldman, F Haeusermann, H K Hebblethwaite, A C Hedgepeth, C E Hieserman, C P Hoffner, R H Jenkins, R A Jones, W Kidd, E S Knowles, F H Laucirica, F A Mather, J W Maupai, J H Menkart, H J Monahan, T R Moore, Jr, R W Morgan, O Nelson, J E Norbury, Jr, H J Northup, E S Pierce, R Polansky, D J Posten, H R Rex, F C Rutherford, S R Sengupta, R E Stern, P E Talley, C Tedeschi, T G Tierney, T A Timmins, A P Tumlin, F G Villaume, R D Wiggins, J C Zehner.

JUNIOR

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Respectfully submitted,
H C CHAPIN, *Secretary*

AATCC Monograph No. 2

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MEETING OF THE MID-WEST SECTION

•

October 29, 1955

•

Bismarck Hotel, Chicago, Ill

Standing (l to r): Arthur T Brainerd; Samuel Klein, American Cyanamid Co, councilor; Jack G Kelley, Du Pont, treasurer; Warren B Broadbent, Geigy Dyestuffs
Seated (l to r): L B MacFarland, American Aniline Products, Inc, councilor; Joseph H Jones, Phoenix Dye Works, national vice president (Western Region); Edward V Burnthall, The Chemstrand Corp, guest speaker; Arthur I Hultberg, Bear Brand Hosiery, chairman

Standing (l to r): William O Fischer, Milwaukee Dye and Bleaching Co; Richard Hauser, Milwaukee Dyeing and Bleaching Co
Seated (l to r): William Payne, General Dyestuff Co; Art Luebbing; David A Anderson, Phoenix Trimming Co; Allen G Kidder, Western Felt Works; Frank E Hempel, Milwaukee Dye and Bleaching Co

Standing (l to r): Frank Aker; E J Sindt, National Aniline Div; Herman A Wills, National Aniline Div
Seated (l to r): W Geitzmar; Chester J Kurowski, Mid-West Processors, Inc; Russell C Lakey, Hapco Chemical Co; Victor C Braun, Acme Galvanizing, Inc

Standing (l to r): Louis Hoehn, Jr, Hyanza Color & Chemical Co, Inc; Anton A Hrust, Western Felt Works; John C Picken
Seated (l to r): Arthur C Teichner, Almore Dye House, Inc; Jarryl Fredericks; Frank S Stever, American Aniline Products, Inc; Walter H Sites, Ciba Co, Inc; James E O'Malley, Jacques Wolf & Co

Standing (l to r): R L Thompson; H Wright; Leonard Goodman, United Yarn Co
Seated (l to r): E Moore; Gerhard R Kremers, Strutwear Inc; Marcus O Kremers, W B Place & Co; F Harry Proudfoot, Hyanza Color & Chemical Co; Richard W Yocum, Swift & Co

Membership Applications——

(Concluded from Page P881)

APPLICATIONS FOR TRANSFER TO SENIOR MEMBERSHIP

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Edmund Fenton
Raymond P Jacobs
David N Koenig
Nathaniel A Matlin
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Victor H Garrow—North Carolina State College. Sponsor: H A Rutherford.

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Jacques Blanchette—St Hyacinthe Textile School. Sponsor: G R Boulé.

MEETING OF THE PACIFIC SOUTHWEST SECTION

•

October 7, 1955

•

Gourmet Restaurant, Beverly Hills, Calif

(Courtesy of A H Roberts, Jacques Wolf & Co)

A—H Fieger, L H Butcher Co; R Andersen, Modern Dyers; E Lindquist, Geigy Dyestuffs

B—S Kitto, Catalina Inc; J Susen, Phoenix Dye; S Burmer, U S Testing Co

C—W Ingham, National Aniline; P Meldal, Peerless Laundry; T Smock, General Dyestuff

D—S Springer, Springer Co; R Mishell, Dyemasters; M Behrendt, Catalina Inc

E—M Kramer, Hollywood Hand Prints; C McCann, Pacific Textile Proc; L Olsen, Ciba Co, Inc; W Campbell, Calif Hand Prints

F—F Fliegel, National Dye & Fin; J Jones, Phoenix Dye; J Smith, Dyemasters

G—S Dadone, L A Piece Dye; R Sumers, National Dye & Fin

H—F Ahl, Du Pont; P Noonan, V Hagenlocker, and H O'Bryant, National Dye & Fin

I—D Brown and J Jelinek, Modern Dyers

J—M Gueffroy and E Meshke, UCSB

K—W Wigglesworth, UPDW; M Franck and R Landry, UCLA

L—J Smith, Dyemasters; J Jones, Phoenix Dye; R Mishell, Dyemasters

ANNUAL MEETING OF THE PIEDMONT SECTION

•

October 29, 1955

•

Hotel Wm R Barringer
Charlotte, N C

PIEDMONT SECTION OFFICERS FOR 1956—Seated (l to r): C O Stevenson, Ciba Co, Inc, vice chairman; Clarence Hooper, Burlington Mills Corp, chairman; H J Jordan, Piedmont Processing Co, retiring chairman and Councilor; J C King, Fairforest Co, treasurer. Standing (l to r): V B Holland, Cannon Mills Co, sectional committeeman; A R Thompson, Ciba Co, Inc, custodian; W E Rixon, secretary, Carbide & Carbon Chemicals Co; Edward A Murray, sectional committeeman; Kenneth S Campbell, North Carolina State College, sectional committeeman

Past chairman Herman J Jordan, Jr receives Past Chairman's Plaque from past chairman Henry A Rutherford

Samuel L Hayes, chairman of the Piedmont Section, 1930, receives Silver Anniversary Tray presented by Raymond W Jacoby, AATCC President

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AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS
LOWELL TECHNOLOGICAL INSTITUTE, LOWELL, MASSACHUSETTS

HISTORICAL NOTES ON THE WET-PROCESSING INDUSTRY

X—Yankee Dyers

SIDNEY M EDELSTEIN

Dexter Chemical Corporation

New York, N Y

This is the tenth in a series of historical articles which the textile chemist and colorist will find of interest.

The author, a prominent science historian, is the founder of an outstanding collection of great works, documents and letters in the history of chemistry and related sciences.

Articles and illustrations in this series are from the author's library.

AS we approach the end of the year, most of us engaged in any phase of the American textile industry can look back over the last year, or over the last few years, with a considerable amount of pride. The American textile industry produces the most goods; does it the fastest and the most efficient. For dyeing and finishing, new dyestuffs, new finishes nad new methods have been appearing at an ever-increasing rate. Even profits and salaries have been at a peak.

THE FIRM OF BURGESS AND GILLET

Things must have looked very different to Amos Beecher and Justin Gillet when they surveyed their business prospects at the end of the year 1814. But who were Amos Beecher and Justin Gillet that we should bother to consider how they felt some 140 years ago? These men in themselves were not important. But they were typical of the independent American dyer in the early days of our country. Their problems were the same as those of a hundred other men engaged in dyeing in many parts of this young country. Even more important, however, is the fact that the records of the dyeing business of Amos Beecher and and Justin Gillet have remained intact through all these years. Reading these records, written in a fine penmanship which is almost unknown today, one almost feels that he is living back at the very beginning of our country. The problems of Beecher and Gillet and those of their customers almost become ours.

Figure 1
Calfbound ledger of firm of Beecher and Gillet

Beecher and Gillet formed their dyeing business in 1813 in Barkhamsted, Connecticut, and continued their partnership until 1818. We know nothing about these two men except what is in their old calf-covered ledger. Perhaps they learned their trade from other craftsmen, or dyeing may have been a family craft handed down for generations. Perhaps they learned from the few books on dyeing which had been published in America for "country dyers." Beecher and Gillet were certainly "country dyers." In fact, practically all of the dyeing of the United States at that time was done by such "country dyers."

The period during which the dyeing business of our two friends was in existence was one of the most hectic in the whole history of the United States. In June, 1812, President Madison had asked Congress to declare war against Great Britain. Up until the spring of 1813, England was so involved in the war with Napoleon that she could pay little attention to the United States. During 1813, however, England was in a better position to begin a blockade of American shipping and by 1814, with Napoleon defeated, England was able to concentrate completely on blockading the United States. This effective blockade by England together with a US embargo on shipping brought about a widespread economic depression throughout the United States. Even though peace was signed between the two countries in 1814, the blockade continued into 1815 and it was several years before this country could climb out of the terrible economic depression which the war had put it in.

Our aforementioned little dyeing establishment therefore began business during a period when textiles from Europe were cut off and when everyone, for the most part, had to depend on textiles which were made at home or at least in the local community. Theoretically, a local dyeing establishment was therefore in an ideal position. Unfortunately, however, because of the depression caused by the war, the residents of the little community of Barkhamsted had no money to pay for their dyeing. Later, however, things were reversed, but our two dyers were still in trouble. With the war over, the depression began to lift and more money was available but at the same time textiles from Europe were again on the market. Most everyone now wanted the latest mode from England and France.

The partners' record book was written in great detail. Every single dye lot is

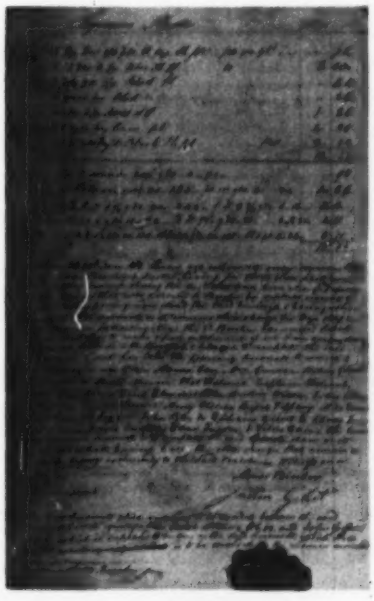


Figure 2
Page from ledger with dissolution agreement between Beecher and Gillet

shown with the charge per yard. Only a few colors were in demand. Blacks and browns were the most popular with occasional blues and greens. This would be expected in a small town far away from big centers and particularly during a depression. Practicality was the only consideration and even today blacks and browns are the symbol of frugality and conservatism.

The prices charged for dyeing were high even by today's standards. Blacks were applied at 15¢ to 30¢ a yard; browns at 20¢ to 34¢ per yard; blues at 11¢ to 30¢, and greens at 20¢ to 30¢ per yard depending on the type of fabric. When it is realized that the purchasing power of a penny was many times that which it is today, one would expect that Beecher and Gillet's annual business would run into thousands of dollars. Unfortunately, however, each dye lot was rarely longer than 10 yards and often as little as 2 yards. Yarn in the form of skeins was even handled in lots ranging from ½ to 2 pounds. Finally, even with the rather limited amount of yardage given to the little firm for dyeing, the customers rarely had money with which to pay their bills. Payments for dyeing were made in the form of notes, cheese, butter, barrels of soap, shingles, nails, cloth, mittens, labor and finally credit on the books of other craftsmen or storekeepeers who were in the same plight as our two dyers.

The record book shows that over the five years of the existence of the dyeing establishment, the total charges for all the business done was approximately $3,200.00 with an average of about $650.00 per year. The total cash payments over this whole period amounted to $482.00 or less than $100.00 per year. The customers, for the most part, even if they were paying in barter, did not pay up for two or three years. Things were so tough and money so scarce that Beecher and Gillet allowed a 20% discount for "cash payment." *Cash payment* was payment in 6 months.

Typical of the large accounts in the ledger is that for Lyman Slade. On September 13, 1813, there were entered the following charges against Slade:

2¼ yards of cloth dyed black at 30¢ a yard.
12 yards of cloth dyed blue at 11¢ per yard.
2⅛ yards of cloth dyed black at 15¢ a yard.
Miscellaneous yarn and cloth dyed black for $2.45.

On November 14, 1813 —

6 yards of cloth dyed with Camwood at 20¢ a yard.
1¾ yards of cloth dyed black at 30¢ a yard.

On October 30, 1815 —

24 yards of cloth scoured for a total of 7¾¢.

In November, 1816 —

Miscellaneous cloth dyed black amounting to 27 yards for a total of $11.22.

The total business that Slade did with the firm from 1813 to 1817 amounted to $22.56.

On the credit side we find that no payment was made until June 20, 1818, at which time it was handled in the following manner:

By 22½ pounds of veal—$0.94
Sundries—as per Slade's own account book, $8.54
Note—$6.21
Cash—$2.00
2,000 chestnut shingles—$4.84

This was one of the firm's best customers and Slade did a lot better in paying up his bills than most of the others.

It is not difficult to see why, after five years, Beecher and Gillet decided to dissolve their partnership in the dyeing business. Their experience was not typical of just a short period in the history of dyeing in our country. It is the story of many other American dyers in Colonial and Revolutionary times.

BEMISS SPEAKS FOR THE COUNTRY DYERS

Amos Beecher and Justin Gillet never complained about the problems of their business or about their competitors. At least there is no such mention in the records that have come down to us. However, Elijah Bemis, a contemporary of theirs, was much more vocal, and in 1815 he published a volume called the "Dyers Companion" *(1)*. Bemis referred to himself as "an unlettered country dyer." His book, however, is replete with detailed information on practical dyeing, which could have been of help to our friends in their dyeing establishment. On page 89 of the "Dyers Companion" Bemis expressed what may have been the sentiments of all of the country dyers of the time, as follows:

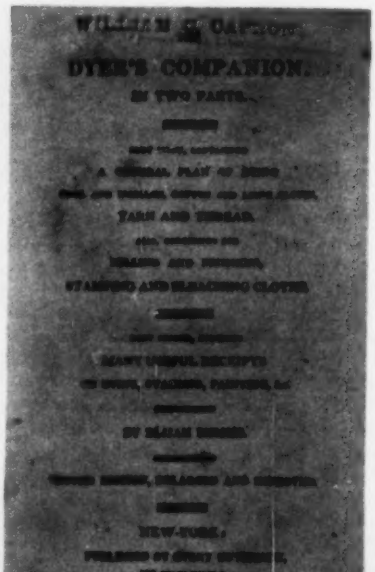


Figure 3
Title page of "The Dyer's Companion"

"OBSERVATIONS ON THE PRESENT SITUATION OF THE DYER'S BUSINESS

Observation first.

We think ourselves masters of our business before we are, and undertake to do that we know nothing of. By this our business is ruined, our customers imposed upon, and our country impoverished; this is the present situation of our business.

Observation second.

Those impostors endure their fellow functioners as well as the public, by discouraging manufactories. Finding they fail of their intentions, they begin to encourage their customers by promising to do better, and to work very cheap; by these impostors, people are deluded and their goods not unfrequently ruined. With the customer, who knows nothing of dressing, cheapness is everything. The workman who is a complete master of his business is often compelled to regulate his prices of work by the charges of those who are ignorant of the trade; consequently the work is slighted, or the mechanic cannot obtain a living; and the employer is a loser in the end, as the goods are badly finished, or perhaps entirely ruined.

Let those who practice in a business make themselves masters of it; then fair and just prices may be obtained for their labor, and the employer will be better satisfied; and real justice be done him.—Thus our manufactories would be increased; the interests of the employer and the employed would both be enhanced; they are inseparable: selfishness counteracts its own views; the injustice we do our country, we do to ourselves.

As a nation we can never be really independent, until we become our own manufacturers of articles of the first necessity. To arrive at this desirable point ought to be our constant endeavour; and every real patriot will use his exertions, not only in word but in deed, to hasten this period."

Surely many 'Amens' can be said to these words today even as they must have been said almost a century and a half ago.

COLONIAL DYERS

During colonial times most of the textiles used by the colonists were made of yarns which were spun in their home and then woven in the home or by a community weaver. In those early times, not much thought was given to the quality of dyeing since the one necessity was for sturdy fabrics to keep the body warm in the harsh winter climate. Among the very earliest of the local industries established in the colonies was the process of fulling. Fulling mills were set up in a number of the little communities to be followed at a later date by small dyehouses. According to one writer on early American chemical industry *(2)*, one of the earliest pioneers in textile finishing and dyeing was John Cornish of Boston, who was described as a dyer, comber and fuller. He specialized in dyeing wool and woolen cloth, using two furnaces, and the inventory of his estate at the time of his death on March 2, 1695, contained the following chemicals and dyes:

Figure 4
Silhouette of Samuel Wetherill

82 pounds of coperas
34 pounds of gall
70 pounds of redwood
60 pounds of potash
35 pounds of madder
230 pounds of fustic

For the most part, those early dyers who set themselves up in the dyeing business in colonial times were professionals who had come over from England. Our knowledge of these men is obtained through the newspaper advertisements of their day. For example, in 1722, in the *Boston Newsletter*, Samuel Hall announced that "he takes in linen cloth to make buckram but that he is also proficient in calendering any silk," and in "watering, dyeing or scouring." Other issues of the *Boston Newsletter* state that "a silk dyer just come from London wants 'ellaborate work,' such as 'brocade, velvet, satin, mohair, damask, needlework, silk and worsted hose'." Towards the last part of the 18th century professional dyers turned up in many of the larger towns of New England. The following announcement appeared in the *Norwich Packet* for July 10, 1775:

Ebenezer Freeman, from Boston,
Blue - Dyer
Informs the public that he carries on the business
of dyeing of Cotton, Tow, and Linen a most
beautiful blue (in indigo) with the greatest despatch
also takes in genteel Boarders.
Has a Handsome Chaise to let. Ladies Gauze Caps
Flys, Handkerchiefs, Aprons.
etc. ready made in the newest taste at his house
leading to the Landing, mostly opposite to Capt.
Hubbards

DYER AND PATRIOT

Occasionally today persons can engage successfully in the dyeing or wet-processing industry and also have broader interests. Some may even leave an imprint on the economic and political life of the country. Rarely can a man become a successful dyer and textile manufacturer today without a large background of training and experience. Samuel Wetherill did all of these a century and a half ago.

Wetherill started out as a successful master carpenter in Philadelphia. In 1775 he became interested in the United Company of Philadelphia for the establishment of American manufacturers. Arguing for an independent textile industry in the United States, by way of example he set up in his own dwelling house a factory for weaving jeans and fustians and also a dyehouse for dyeing these and other coarse cloths. The dyehouse was actually set up in a two-story frame house at 9 South Alley, which is now Commerce Street in Philadelphia. Wetherill was extremely patriotic and on his own account furnished Washington with a large part of the fabrics which were needed for the army at Valley Forge. Wetherill was also an ardent Quaker, but was disowned by most of his fellow Quakers because of his support of the War of Independence. The City of Philadelphia, appreciating the courage of this great patriot, actually furnished a new meeting home for a separate group of Quakers, who, along with Wetherill, supported the colonies in their struggle.

Samuel Wetherill was a man of great enterprise and imagination. Needing chemicals and dyes for his own dyehouse, and finding some difficulty in obtaining them during the War, he established an enterprise for preparing natural dyes and later medicinal drugs. His success in this work led him and his son to the development of a chemical industry in Philadelpia. Wetherill was the first manufacturer of white lead in the United States, and the first in the manufacture of many other chemicals. An historian, writing about Wetherill over a hundred years ago, had this to say about this great dyer:

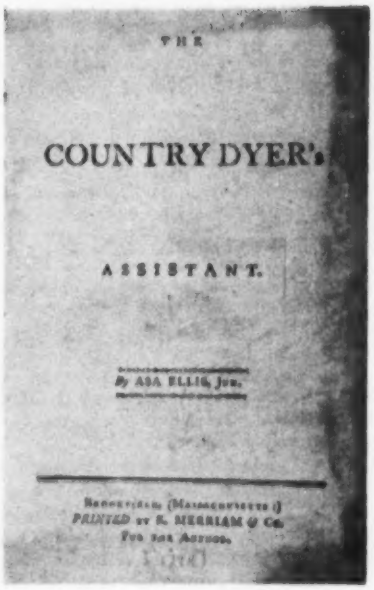

THE
COUNTRY DYER's
ASSISTANT.
By ASA ELLIS, Jun.
PRINTED BY E. MERRIAM & Co.

Figure 5
Title page of first book on dyeing published in the United States

"He lived in a time which tried mens souls, and he bore the trial with firmness and patience; and manifested to the last an unwavering patriotic spirit, religiously maintained while his valuable life was spared. He lived to see the fruits of independence, in the extension of national prosperity and in the progress of freedom, science, and truth" *(1)*.

ASA ELLIS, APOSTLE OF THE EXPERIMENTAL METHOD

The name of Asa Ellis, Jr, has been mentioned often because of his distinction in writing the first book on dyeing to be published in this country. This was a little volume of 139 pages entitled, "The Country Dyer's Assistant" *(4)*. In his book he reveals the new revolutionary spirit in America which was showing up not only in politics but also in science and technology.

Ellis did not believe that everything from the past had to be accepted without examination. Furthermore, he felt that our young country should stand on its own feet. In the introduction to his book he makes a plea for the manufacture of our own woolens:

"In such a country as America, especially the northern states, which abound in sheep, the art of dying wool is of high importance. Were the art suitably cultivated, we should not only, by industry satisfy our curiosity upon that raw material; but prevent an extensive and needless importation; and of consequence retain our money in our own country. The art of dyeing is an useful branch of chymistry. Its influence on the sale of all stuffs used for furniture, or apparrel, has been felt by almost all Europe, who have been enriched by it, especially England.

"But few people, in America, estimate the value of manufactured woollens, of their own country. We too generally resort, for our cloths, to the manufacturies of Europe."

Making a plea for faster colors and better work he says:

"With regard to our own manufacture of cloth, women and children commonly dictate the colours to be imprest upon them. But they frequently make an injudicious choice; the colour which they dictate fades; the coat is spoiled, is thrown aside, or given to Jack the garden boy, and poor little Tommy must have a new one.

"True colours retain the complexion that is imprest on goods. False ones, on wearing and being exposed to the sun and air, lose all their original tints; and of consequence the goods are so much injured, as to render them unsailable."

How modern this would sound if a few of the words were changed to fit our language today.

After pointing out how the government of France had set up regulations for improving the art of dyeing and at the same time had made use of chemists and scientific methods, he scolds the many empirical dyers and urges them to make use of improvements with the words:

"Too many dyers of this country, have precluded themselves from improvement. Confining themselves to incorrect recipes, they have neglected experiments and other general means of information."

Explaining the nature of his work, he says:

"A circumstantial detail of experiments, with their various results, is, in this small volume, presented to the country dyers. In the following work, I have endeavored to be plain and intelligible to all who can clean the copper, or turn the reel.

"This publication, presented to the country dyers is the result of twenty years practice, close study, fair trials, unwearied pains and expense.

"The author flatters himself that, he shall avoid the imputation of vanity, while he entertains a confidence that, the following instructions, will be of public utility, and of service to many of his brethern in the art of dying."

Those country dyers who availed themselves of Ellis' little book must have profited greatly, for the book bears out the modest claims of the author.

Ellis gives details for the setting up of a dyehouse even though the equipment used in those days by the country dyers was quite meager. He points out the need for "steel-yards and scales which are true, in order to weigh dyestuffs, which ought never to be used without strict attention to their weight."

His information on dyestuffs is extremely detailed, and Ellis explains what each dyestuff is, where it comes from, for which type of dyeing it best serves, and particularly methods for testing the purity and strength of these dyestuffs.

The dyes used by Ellis were the important standard dyes of the world. Those mentioned are indigo, cochineal, camwood, logwood, barwood, greenwood, brazil-wood, fustic, turmeric, sumach and madder. In addition, Asa Ellis did not disdain using many of the native American barks, as for example, butternut, hemlock, yellow oak, white oak bark, alder bark, birch and white maple.

Figure 6
Richard Gibson

The setting up of a standing indigo vat requires a considerable amount of skill even today. One can imagine the problems of making and controlling such a vat in the time of Ellis. Ellis furnishes complete and practical details for preparing this vat, keeping it stable and dyeing woolens in the vat using the natural reducing agents available in the backwoods of this country.

In the days of Ellis a dyer was more than a dyer. He often was concerned with fulling the fabrics, shearing, napping, pressing and all the usual finishing operations. Ellis gives full practical details for all of these operations and even lists colors and dyestuff combinations which would withstand fulling. The new experimental method that was being widely accepted in Europe had by some unknown means become the guiding philosophy of Ellis. In his little book, which was intended to be strictly a practical guide for the country dyer, he lays out in detail methods for running dyeing and finishing trials on a scientific basis.

Finally, with a strong feeling for the principle of "Made in America," Asa Ellis devotes his last chapter to the subject of America producing its own dyestuffs. With a certain amount of bitterness he ends with:

"For a great proportion of the ingredients employed in dyes, we depend on Europe to furnish. With Europeans, it is an important object to bring us their factories for all the cloathing we need. As we attempt an independence of their markets, they increase their duties on dyestuffs which we import. Not one cask, of Cochineal, can we obtain from our sister continent, South-America; from thence it must pop through the hands of Spain and England. From England we receive it at an extravagant price.—Does it become an independent nation to be thus dependent on others for articles which perhaps may abound in our own country? Or shall we without inquiry, conclude that nature has denied us these articles; being partial in the distribution of her favors?—If our government should consider it worthy their attention, to encourage some able chemist to explore the qualities of our fossils, woods, barks, shrubs, plants, roots, weeds and minerals, perhaps, the advantages, our rising nation might derive, would soon indemnify us for the extra expense."

Over a hundred years had to go by before the exhortations of Asa Ellis and many other voices were listened to and before American dyers became independent of Europe for their supplies of dyestuffs and chemicals.

MODERN DYER — 1860 STYLE

By the middle of the 19th century the colorful country dyer, operating his small dyeing establishment, began to disappear. His place was taken by the professional dyer, who was employed by the large commercial establishments, which manufactured and dyed textiles on an ever-increasing scale. These newer-type men were confronted with many problems that had not been considered theretofore. Fibers were being blended, and this alone posed an enormous problem because of the limitations of the dyestuffs (because of their natural origin). No longer could endless hours be spent in preparing dyebaths or in handling small lots of goods because speed, production and low costs were of the essence. These problems required quick thinking, hard work, and a thorough knowledge of dyeing and chemical principles. In addition, a feeling for the urgency of production was needed.

A typical dyer of this "new" type was Richard Gibson. We pick him out as an example only because he speaks for his fellow dyers in his book, "The Art of Dyeing All Colors on Raw Cotton or Cotton Wastes for the Purpose of Working with Raw Wool" *(5)*. This book was probably the first published in America dealing with all of the new problems of high production and the dyeing of fiber blends.

Gibson, in the characteristic vein of many modern dyers, complains of the problems with which he is confronted, the fact that the public doesn't know what it really wants and the dishonesty of many competitors, but nevertheless he proceeds to go to work by giving full details on how to properly operate an up-to-date dyehouse of the day.

In the introduction, Gibson, explaining his problem says:

"A treatise on this particular branch of dyeing has long been wanted; but no time has appeared to call for it so imperatively as the present; when the introduction of more or less Cotton into almost all kinds of Woolen Goods, has become everything but universal.

"The Dyer in coloring for these low-priced fabrics, has got no small difficulties to contend with; for the nominal price at which

these spurious goods are sold, necessarily confines him to the strictest limits of penurious economy, and prevents him from using those processes and materials which are applied at greater expense, but with better success, on articles of a higher value.—That these difficulties can be overcome, is the subject matter of the succeeding pages to show; the object in placing them before Dyers and manufacturers being to make known and diffuse generally a series of Operations in a variety of Substances, which, by their Effectiveness, Economy, and Expedition, are better calculated than any other processes I am acquainted with, to supply the wants of these low priced fabrics in the article of colors."

Then, apparently becoming even more angry as he proceeds, Gibson says:

"It is scarcely the province of this work to moralize on the iniquitous practice of mixing Cotton with Wool; and with a view of palming this spurious fabric upon the public as Woolen Goods, yet justice compels us to say that it is a most fraudulent and foolish speculation. Though begun, in the first instance, by an individual or two, for the purpose of self-aggrandizement, and who had no regard either to uprightness of character or the principles of common honesty; such is the nature of humanity, that, very soon, numbers were found to imitate and join them in the nefarious and dastardly business of deceiving and cheating their unsuspecting customers; until, as iniquity is similar to infectious diseases—one or two 'scabby sheep have affected the whole flock;' and now, what was begun in dishonesty by a few, is obliged to be continued from necessity by the many.

"Although it has, at the present time, become almost an universal practice among Woolen manufacturers to adulterate their fabrics with Cotton, yet the universality of the crime is no excuse for the perpetration of it, or any cover for its villainy; and however it may be winked at on account of its common occurrence, it stands before us in characters of bold relief, as an enormous fraud perpetrated upon those with whom honesty and fair dealing would be the best policy for us to pursue."

After getting this off his chest Gibson proceeds to say:

"But in despite of our moralizing, there is every prospect of this moral disease running on to its final consummation. We will, therefore, proceed to our appointed task as a matter of necessity, and endeavor to explain those processes and principles which bring us Dyers in as co-partners in this grand swindling concern."

Gibson then proceeds, in a large volume of over 408 pages, to give very specific details for carrying on the dyeing that the manufacturer wants but with which he disagrees. The recommendations that Gibson gives for building a dyehouse could well echo the sentiments of dyers throughout the world even today. He says:

"The situation and construction of a Dyehouse is of far more importance than most persons imagine, both in respect to economy and the production of good colors. Ninety-nine out of a hundred of these *hog-styes* going by the name of Dyehouses, are no more calculated for the purposes of coloring than they are for jeweler's shops; and in winter, especially, are not fit for either man or beast to be exposed in. It is not one of these dens that I am goin gto portray before you, but a place that shall be adapted to answer the purpose for which it is intended."

Gibson makes a plea for light, ventilation, plenty of room, continuous flow of goods and all of the requirements that would seem to fit the year 1955. Surely any textile plant of Gibson's day would have met with real success in their dyeing if they had a dyer who would carry on Gibson's advice with at least a portion of his toughness—a characteristic which was certainly needed by the dyer of 100 years ago.

BIBLIOGRAPHY

(1) Bemiss, Elijah, "The Dyers Companion", in two parts, New York, 1815.
(2) Haynes, William, "American Chemical Industry", Volume I, New York, 1914.
(3) White, George S, "Memoir of Samuel Slater", Philadelphia, 1836.
(4) Ellis, Asa, Jr, "The Country Dyer's Assistant", Brookfield, Mass, 1798.
(5) Gibson, Richard, "The Art of Dyeing All Colors on Raw Cotton or Cotton Waste", Willimantic, Conn, 1861.

Back numbers of American Dyestuff Reporter less than two years old may be obtained from Howes Publishing Co, Inc, 44 East 23rd Street, New York 10, N Y, and earlier numbers from the Secretary, American Association of Textile Chemists and Colorists, P O Box 28, Lowell, Massachusetts.

Prices postpaid: 50 cents each to nonmembers of AATCC, 35 cents to members; complete volumes $5.25 to nonmembers, $4.50 to members.

THE INDEX TO

VOLUME 44

AMERICAN DYESTUFF REPORTER

WILL APPEAR

IN THE DECEMBER 19th

ISSUE

ADR AVAILABLE ON MICROFILM

Arrangements are being continued with University Microfilms, 313 North First Street, Ann Arbor, Michigan, for supplying subscribers of the Reporter with a microfilm edition. This arrangement was effective with the 1952 volume. The film copy will be delivered at the end of the volume year for those who subscribe to the service and it will include all issues published during that period. It is estimated that the film edition requires only 5% of the space required for the paper edition, which is bound. Complete information is available from University Microfilms.

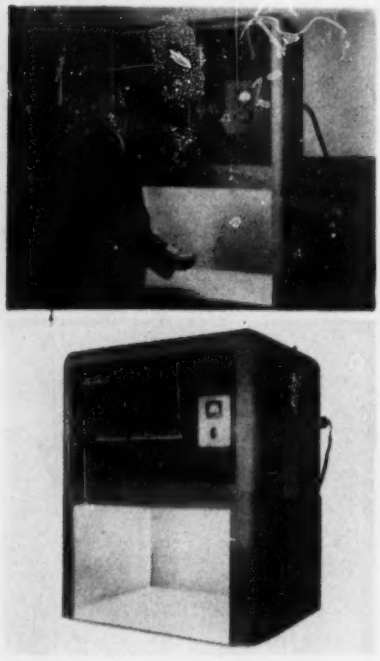
Equipment——

(Concluded from Page 863)

SUPER SKYLIGHTS BBX-826 and BX-848-A

(Macbeth)

These units were newly designed in 1955 to give maximum efficiency so far as intensity is concerned, plus an accurate duplication of ideal north sky daylight at 7500°Kelvin for critical industrial matching problems, it is claimed. Most applications in the textile field for these particular skylights lie in the dyehouse, where new batches are made to match given standards or to match known or unknown samples. For cases where it is necessary to make matches against samples of an unknown formula, a secondary source of illumination, i e, horizon sunlight, in addition to north sky daylight, is built into each booth for the purposes of detecting metamerism and enabling one to take steps to correct same, if it exists. The units come complete and ready for operation. They need only be connected to live current for immediate use. They are said to be of extremely rugged design.



Macbeth Color Matching Skylights

(Top): Model BBX-826

(Bottom): Model BX-848-A

TABLE MODEL INSTRON UNIVERSAL TESTING INSTRUMENT

(Instron)

This new table model of the versatile Instron universal testing instrument, introduced last spring by Instron, has attracted considerable interest in the textile industry. The instrument records with electronic accuracy stress-strain curves under tension and compression.

Full-scale load ranges from 2 grams to 200 pounds are available through the choice of three load cells. Inertialess weighing is said to permit rapid response to load fluctuations in the sample which enables a heretofore unobtainable degree of accuracy in an instrument in this price range. The high-speed recorder is equipped with a choice of synchronous chart speeds to provide a range of extension magnification.

The crosshead is driven synchronously through fast-acting magnetic clutches and change gears to provide a choice of constant and reversible testing speeds over a range of 250 to 1. This range can be either from 0.2 to 50 inches per minute or, in an alternate model, from 0.02 to 5 inches per minute, with an available jaw travel of 30 inches. The rapid traverse speed can be selected by similar change gears over a speed range from 50 to 2 inches per minute, or alternatively 5 to 0.2 inches per minute.

A space of 3 inches is provided around the crosshead assembly to enable the use of special conditioning chambers, without modification of the unit.

Accessory equipment is available to meet individual testing requirements.

TUBE-ON SAFETY TUBE INSERTED

(Central Scientific)

A new safety device for inserting glass tubes in rubber stoppers, rubber tubing and bulbs. Called the Cenco Tube-On Safety Tube Inserter, the device is said to virtually eliminate the danger of lacerated fingers or hands.

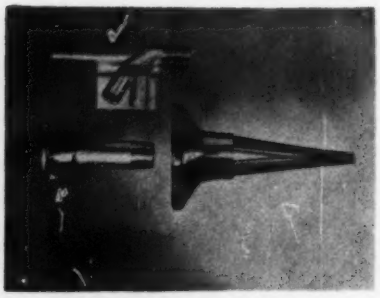
In addition to minimizing tube breakage and increasing laboratory safety, the Tube-On makes sleeving jobs easier and faster, it is claimed.

The Tube-On is said to be capable of sleeving most laboratory tubing either straight or angle, including T, L, and Y tubes. It is adaptable to angle tubing of 1.4 mm to 9 mm in diameter and up to 13 mm, or more, for straight tubing.

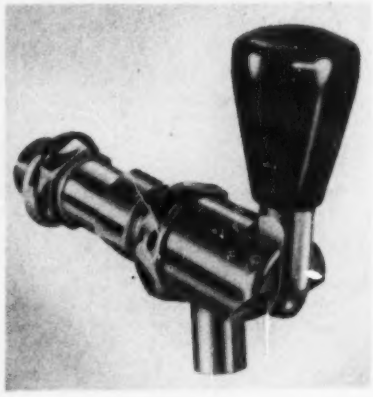
Three basic parts make up the Tube-On—the plunger, adapter key and inserter, which has flexible steel fingers for guiding the tube. In use, the fingers of the inserter are placed in the opening of the stopper. Then the object to be sleeved is slipped into the inserter and the plunger is placed over the top of the tube. A steady pressure on the plunger pushes the glass tube into position. A slight twisting movement frees the inserter from the stopper.

With the exception of the flexible steel fingers, the Tube-On is constructed entirely of polished light weight die-cast aluminum.

Price of the Tube-On, Cenco catalogue number 13993, is $10.00 each; $9.00 in lots of three; $8.00 in lots of six; $7.50 in lots of twelve.



Cenco Tube-On Safety Tube Inserter



Economy Universal Faucet

UNIVERSAL FAUCET

(Economy)

This sanitary faucet with Kel-F sealing rings is said to be corrosion-resistant and fume-tight. The Kel-F assembly is interchangeable with the company's Universal line of hot and cold liquid dispensers with neoprene seals, and is available in stainless steel and in triple chromium plated brass, with heat-resistant moulded plastic handle. Positive shutoff is said to be assured either by automatic closing or, with a simple adjustment, by manual operation.

Use of the chemically inert Kel-F "O" rings reportedly permits steam sterilization and other special cleaning operations, without risk of damage. Complete sanitary design is said to include elimination of residual trap areas, to further insure against contamination.

The new unit is designed for quick and easy removal, cleaning, part interchange and assembly.

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Advertisements in this section are restricted to HELP WANTED—POSITIONS WANTED—EQUIPMENT wanted or for sale. Rates, effective February 1, 1951: One-time, $10.00 per column inch; 3 consecutive times (same copy), $9.00 per column inch; 13 or more times, $8.00 per column inch; Position Wanted, $2.00 per column inch. Figure 38 average words per column inch. Publisher reserves the right to reject or discontinue any classified advertisement. Replies should be addressed: Box Number . . . c/o American Dyestuff Reporter, 44 East 23rd Street, New York 10, N. Y.

ABSTRACTING SERVICE—Abstracting and digesting of foreign patents and periodicals. Literature review and special reports in dyestuff and cellulose chemistry. PAUL WENGRAF, 88-36 ELMHURST AVENUE. ELMHURST 73, NEW YORK.

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POSITION WANTED: If you require an aggressive person with imagination and know-how for Technical Service Development, or Technical Sales in any branch of textile industry, please contact this individual. Ten years' experience as laboratory supervisor, dyer, finisher, management. Textile college graduate. Write Box 980.

A New England company engaged in the manufacture of dyestuffs and auxiliary products, has vacancies in its Technical Service Department for Junior Technical Officers. Applicants should hold a degree in Chemistry, Applied Chemistry, or Physical Chemistry, and post-graduate experience is desirable. Some knowledge of dyeing, printing and finishing of textiles is desirable but not essential. All members of our Technical staff have been informed of the insertion of this advertisement. Write Box No. 125.

DYER-CHEMIST WANTED: By leading mill specializing in fine woolens and cashmeres. Yarn and stock dyeing. Must be aggressive and thorough. Age 30-45. Top salary and secure future for a well-qualified man. State education and experience fully in your first letter. All replies held confidential. Write Box No. 122.

POSITION WANTED: B.Ch.E., 1949, age 32. Acquainted all phases of O/W textile printing paste formulation, including pigment dispersion, latex and resin compounding. Broad surface coatings background. Seeks position New York-New Jersey area. Available immediately. Write Box No. 123.

A New England company engaged in the manufacture of dyestuffs and auxiliary products, has a vacancy in its Technical Service Department for a Senior Technical Officer, and applications are invited. The applicant should hold an honors degree in Chemistry or Physical Chemistry and post-graduate experience. Details of industrial experience should be stated, and preference will be given to applicants with experience with vat dyes. A successful applicant must be able to direct junior staff in investigational projects. All members of our Technical staff have been informed of the insertion of this advertisement. Write Box No. 124.

POSITION WANTED: DYESTUFF CHEMIST, PhD, experienced administrator. Presently employed with major dyestuff producer. More than 10 years in manufacturing and development of processes for dyestuff, intermediates, textile auxiliaries and other organics. Seeking more challenging opportunity. Write Box No. 128.

POSITION WANTED: PRINT SUPERVISOR-COLORIST. Extensive experience on machine printing of cottons, rayons and synthetics. Proven ability taking charge of printing and color-shop departments. Age 42. Write Box No. 134.

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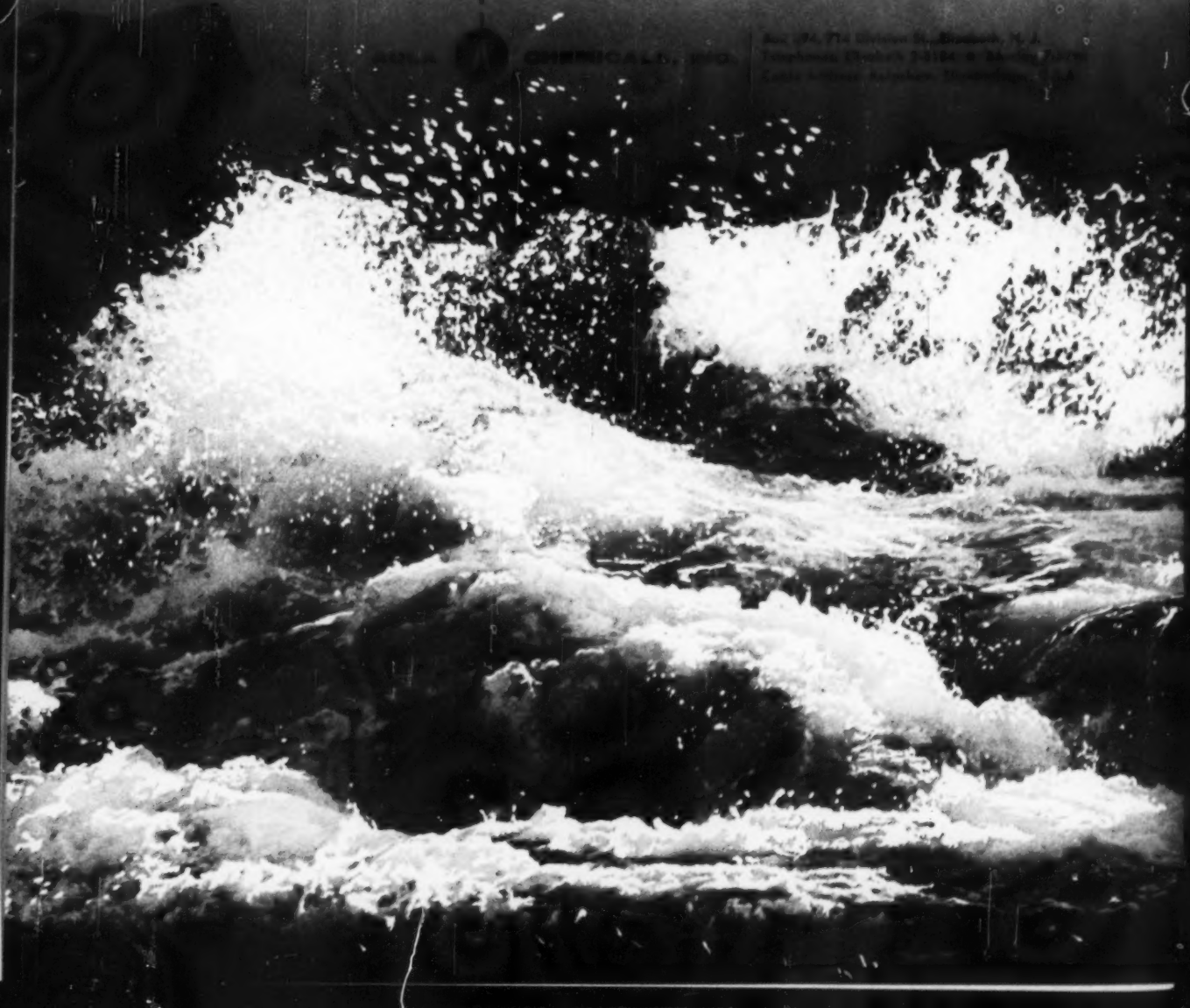
The joint use of these two new Aulabrite developments enables the textile printer to produce brilliant shades with excellent fastness properties at a cost lower than ever before.



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WANTED: DYER, to take charge of dyeing department of new American mill in Brazil, located in large modern city. Must have extensive experience and broad knowledge of box, jig and pad dyeing of spun synthetics and wool blends. This job offers exceptional opportunity to right man to join a growing and progressive company. Customary foreign service arrangements and all travel expenses for man and family. Must be willing to teach and train local labor. Knowledge of Portuguese or Spanish an advantage but not a necessity. Write full details to Box No. 131.

WANTED: TEXTILE FINISHING EXPERT for Technical Service and Development Work. Graduate chemist, with emphasis on textile chemistry. Must have broad laboratory and process experience with all types of textile finishes. Should have unimpeachable character and attractive personality and be willing to travel half time. Good salary and excellent opportunity for growth with world-wide manufacturer of synthetic fibers. This is not just a job, but a challenging and outstanding opportunity. Send full particulars to: Director of Industrial Relations, Courtaulds (Alabama) Inc., P. O. Box 1076, Mobile, Alabama.

POSITION WANTED: Immediately available, services of research and production chemist. Experienced plant management, improvement in dyestuff and chemical production methods and control. Educated in Germany and United States. Replies confidential. Willing to relocate. Write Box No. 132.

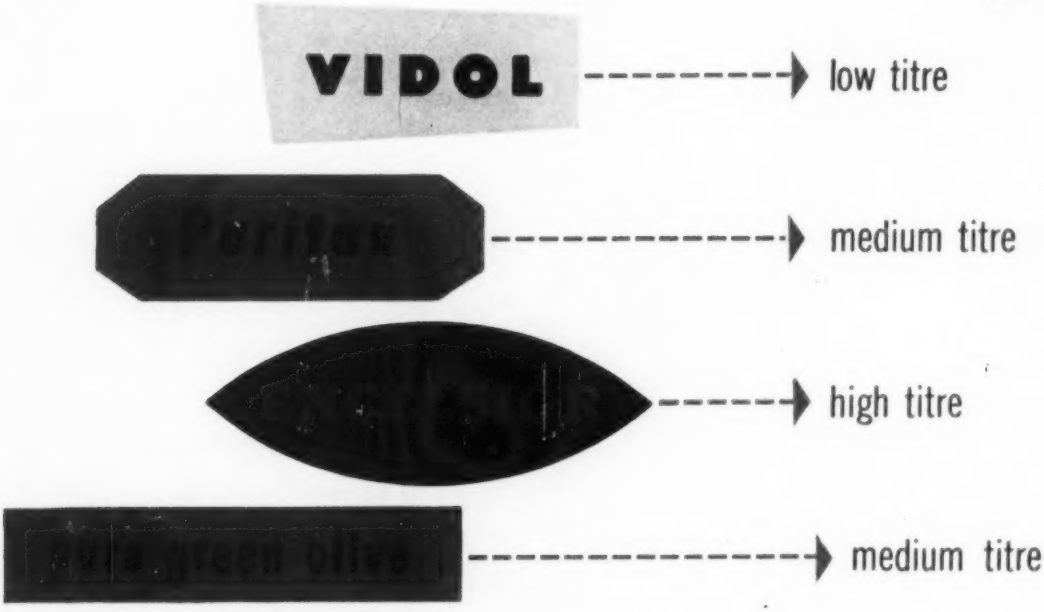
POSITION WANTED: HOSIERY DYER. Will go anywhere, capable of taking full charge of dyehouse. Experienced in dyeing of all kinds of fibers. Write Box No. 133.

WANTED: CHEMIST-DYER. Unlimited opportunity for a chemist with laboratory and dyeing experience in orlon and synthetic fibers. Opportunity to supervise a growing dyeing operation for an inside mill having three machines. Previous experience in sweater and knitwear industry preferred. Complete resume. Lofties Knitting Mills, 85 De Kalb Avenue, Brooklyn 1, N. Y.

WANTED: FIBER CHEMIST. Major surface active chemical manufacturer requires chemist experienced in manufacture and processing of nylon or other synthetic type yarns. Position involves development of yarn and fiber processing treatments and their presentation to the LATEX CHEMISTS WANTED for expanding service resume. Write Box No. 130.

LATEX CHEMISTS WANTED for expanding service and processing field. Excellent opportunity for two young qualified chemists to work under direction of research head. Replies should describe education and experience in latex compounding. Wica Chemicals, Inc., Charlotte, N. C.

the big 4 in textile flake soaps



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That clean lofty wool, those soft, perfectly fulled woolens and worsteds; clean, bright prints and vat and naphthol dyeings; completely degummed silks . . . all these can be yours with a Laurel *Quality* Soap.

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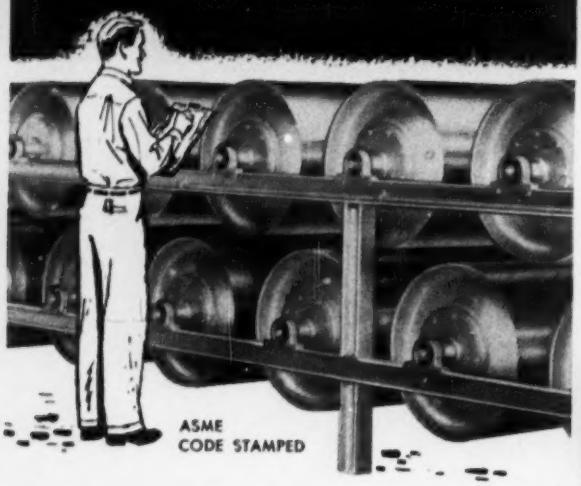
Lighter is the word



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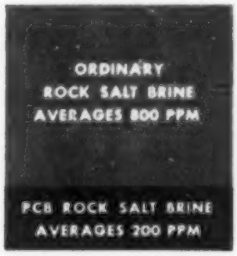
MORTON "PCB" is a new, patented rock salt product. It contains southern rock salt, plus special chemical compounds in pelletized form to give a controlled dissolving rate. The purpose of this combination is to keep harmful calcium deposits from going into solution, and thus eliminate them from the brine.

As the chart below shows, "PCB" Rock Salt brine contains approximately 80% *less calcium* than brine made with untreated rock salt. (The less than 200 PPM calcium in "PCB" brine will not precipitate.) What's more, "PCB" can be used in your present rock salt dissolving equipment without additional construction or extra labor.

"PCB" is specifically recommended when brine is used in dyeing rawstock, package, beam, beck or jig with either sulphur, direct or naphthol dyes. ("PCB" brine also can be used effectively in your water softener.)



PPM Calcium in Brine

Brine made from ordinary rock salt contains approximately 4 times more calcium than brine made with new "PCB".

"PCB" Brine

● Improves crock fastness with naphthol dyes ● Increases color intensity where sulphur dyes are used ● Results in softer finishes, more even shades ● Saves money on sequestering agents ● Aids in retarding corrosion ● Is far less expensive than brine produced from purified low calcium evaporated salt.

FREE! Let a Morton Brine Engineer take a sample of your brine. He'll have it analyzed in Morton's laboratory and tell you how much you can reduce the calcium content by using "PCB" Salt.

MORTON SALT COMPANY
Industrial Division, Dept. **AD-12-5**
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☐ I would also like a Morton Brine Engineer to make an analysis of the brine in my plant.

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SIPEX SIPONICS

ALCOLAC News

SIPON SIPONOLS

American Alcolac Corp. Baltimore, Md. December, 1955

NEW SYNTHETIC DETERGENTS MEET TEXTILE INDUSTRY NEEDS

NEW LAURYL ALCOHOL DETERGENT FOR DYED AND PRINTED FABRICS

A new, modified lauryl alcohol sulfate, SIPEX 7WC, suitable for scouring dyed and printed fabrics is now available from American Alcolac. Its advantages include solubility in all proportions; good wetting; free rinsing; and excellent detergency at high or low temperatures. It is a light amber paste, 30-32% active, with a pH range of 7.1 to 7.3; has a mild, pleasant odor.

EFFECTIVE FOR TEXTILE SCOURING

SIPEX 7WC is particularly effective in the presence of fats and greases, as its foam, while not excessive, remains thick and stable for long periods of time. SIPEX 7WC provides excellent detergency in either hot or cold water, and is easily rinsed away in warm or cold

continued next column

LABORATORY FACILITIES EXPANDED BY ALCOLAC

An expansion program, now under way, will double the laboratory facilities of American Alcolac. The new facilities will be devoted to commercial application research, and to customer service. The enlarged program is in line with Alcolac's policy of providing the best possible service to customers, coupled with quality products.

Fatty Alcohol Sulphate now available for wide range of applications at moderate cost

A new product, designated SIPEX TS (Sodium Tallow Sulfate) is now being offered by the American Alcolac Corporation's Baltimore plant. It combines superior detergency at high temperatures with moderate foaming and good rinsing characteristics. An anionic, SIPEX TS is an amber paste, with a mild, pleasant odor. It is a practical product for a wide range of applications as it is the lowest priced fatty alcohol sulfate available today.

DETERGENCY NOT AFFECTED BY HIGH TEMPERATURES

SIPEX TS is particularly well adapted to the needs of the textile industry in that its detergent qualities are enhanced by the high temperatures normally required in the processing of textiles. It leaves fibres soft and manageable, thus it is recommended for the final washing of cotton and wool where a good "hand" is required. Its low cost now permits wider use of fatty alcohol sulfates by the textile industry. Generous samples are available on request for testing in your plant. Use the coupon.

water leaving cotton and wool with a good "hand." It is especially recommended for the scouring of printed and dyed fabrics and for the final washing of synthetic fibres. Use the coupon below for complete information and generous samples with which to make tests in your own plant.

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Please send sample of SIPEX TS ☐ SIPEX 7WC ☐

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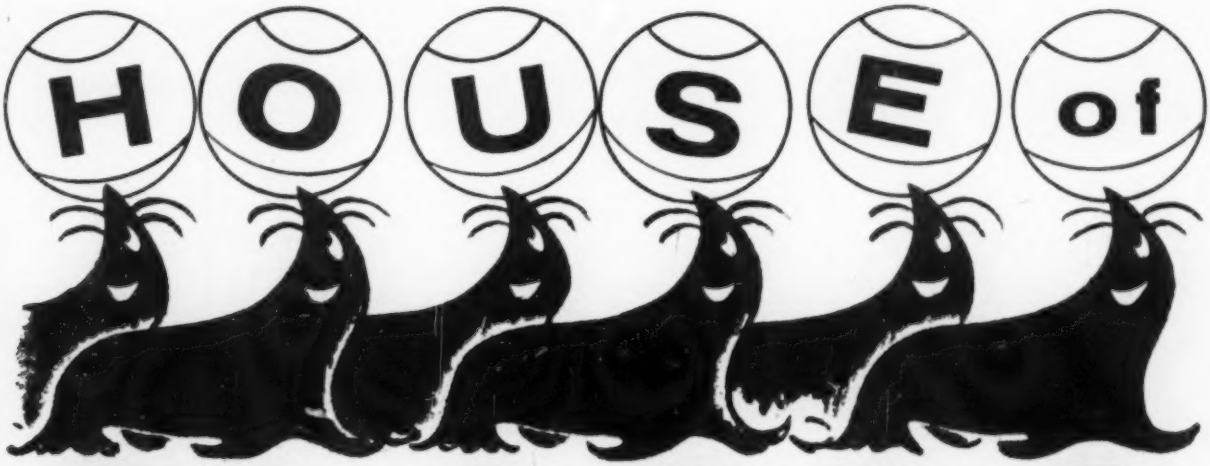

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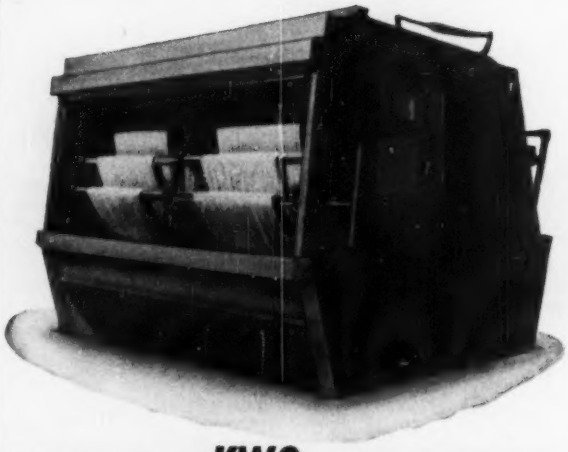

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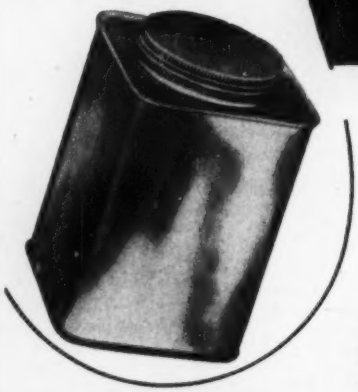

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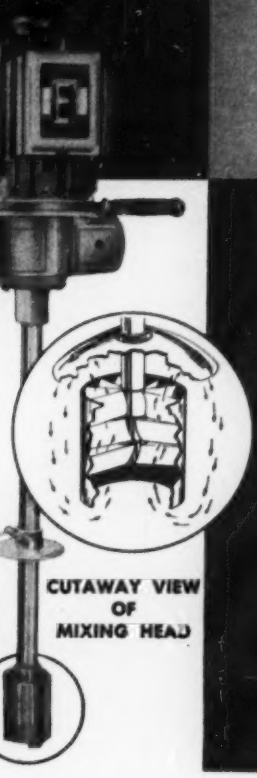

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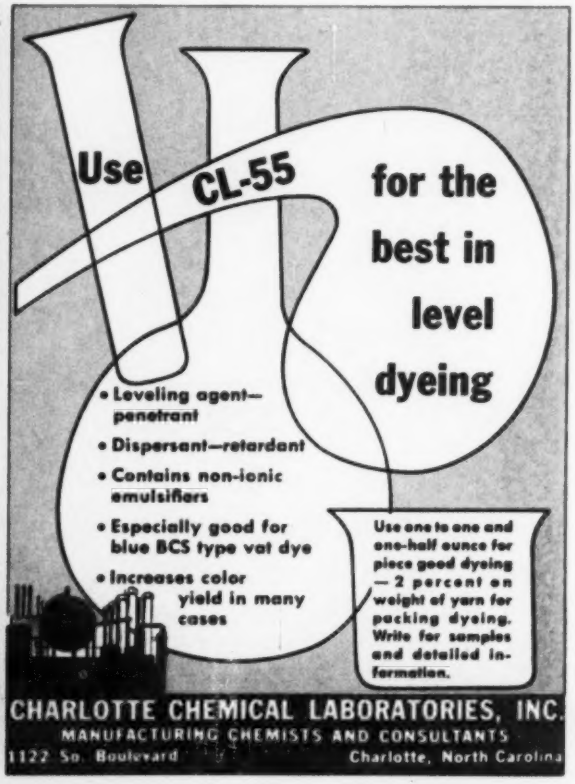
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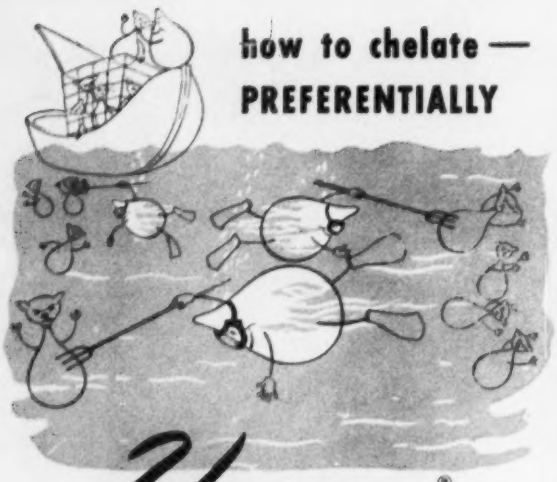

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pH 8.65	Ni	Co	Cu	Zn	&	Cd	Ca	Mg	Sr Ba
pH 11.00	Co	Ni	Cu	Zn	&	Cd	Ca	Mg	Sr Ba

The metal to the left is more strongly complexed than the metal to the right. A metallic ion that can form a stronger chelate structure with Versene will displace another metal from the chelate compound.

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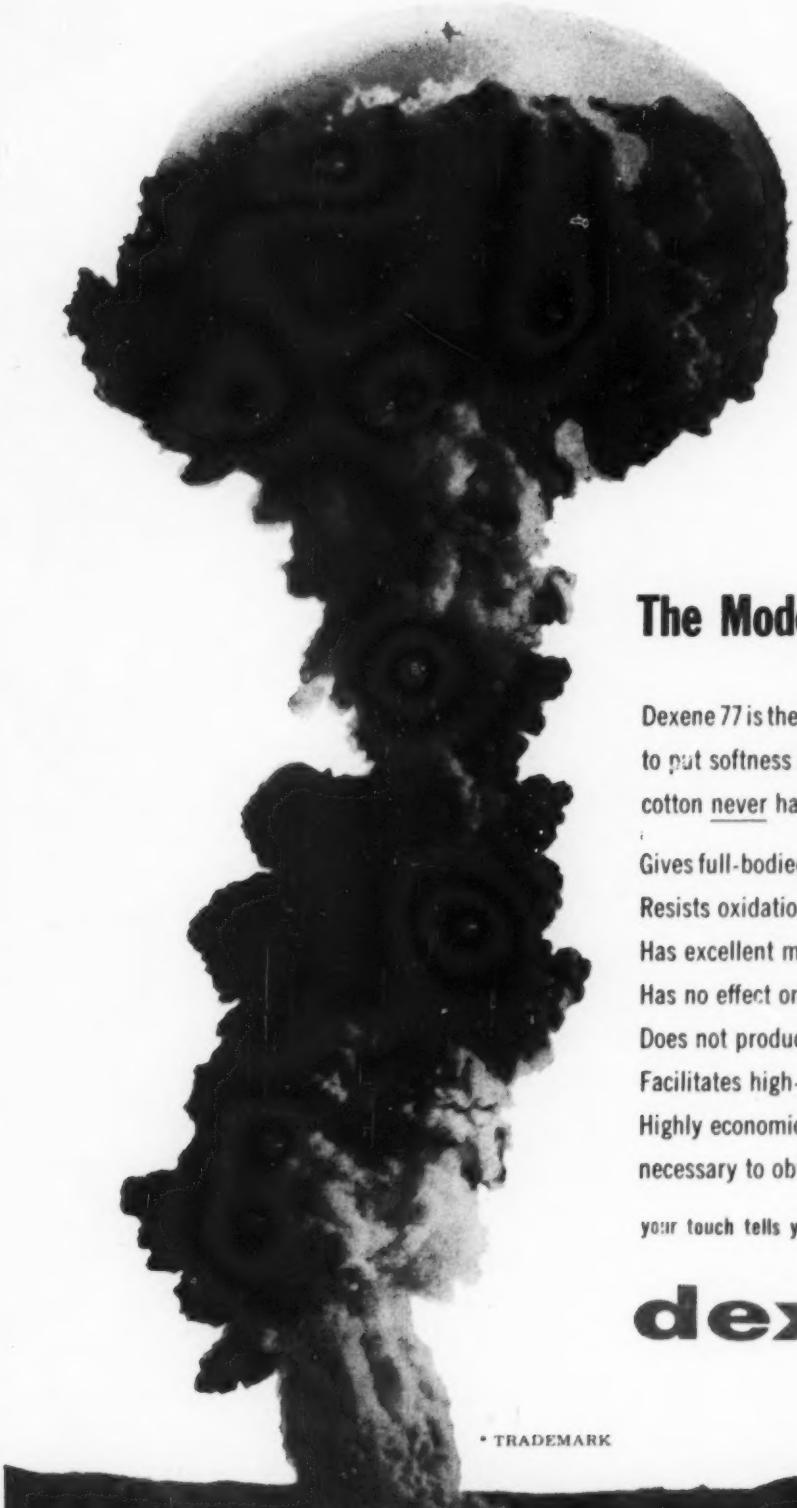

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